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A
GLANCE AT SOME OF THE
BEAUTIES AND SUBLIMITIES
OF
SWITZERLAND:

WITH EXCURSIVE REMARKS ON THE VARIOUS
OBJECTS OF INTEREST, PRESENTED

DURING A TOUR
THROUGH ITS PICTURESQUE SCENERY.

BY JOHN MURRAY,
F. S. A, F. L. S, F. H. S, F. G. S, &c.

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TO
EDWARD RUDGE, Esquire, F. R. S.

F. S. A., F. L. S., F. H. S., &c. &c.

ABBEY MANOR HOUSE, WORCESTERSHIRE,

THIS VOLUME

IS INSCRIBED WITH EVERY

SENTIMENT OF

RESPECTFUL ESTEEM.

ADVERTISEMENT.

IN introducing to public notice this fragment of the picturesque of Switzerland, I feel that I am not warranted in saying any thing apologetic, because it might have been entirely withheld, and suffered to slumber undisturbed among other manuscripts of a similar kind; and but for the partialities of friends, who were pleased to pronounce a vote in its favour, such would have been its doom. The reader will doubtless find numerous inadvertencies, and perhaps important omissions. He may, too, discover, that, in my movements, I have been too abrupt and hurried in some parts, and too diffuse and slow in others; but he will, at the same time, be pleased to recollect, that circumstances have sometimes produced this inequality, and that favouritism for particular pursuits has at other times had its bias. The greater part, however, is a narrative of facts and observations registered on the spot, believing with the late Dr CLARKE, that a few notes made under such circumstances are worth a "whole cart-load of Recollections." Where my notes have necessarily been incomplete, I have consulted the best authorities to whom I could have access, and adopted their information when I found it corroborated by personal inquiry.

In my remarks on the Religion of some of the Cantons, as bearing on their moral features, I have studied to be a conscientious reporter of what I saw and heard. I cannot expect that my readers will feel as much interest in the question of the Religion of Geneva and other Protestant Swiss Cantons as I do, who am a Member of the Church of Scotland, when I remember that it was the cradle of our established Religion. In my observations on CALVINISM, I have simply referred to the question as contradistinguished from SOCINIANISM, and the sad defection which the Established Church of Geneva now presents from the original standard of her religious creed. If my animadversions on Catholicism be considered severe, I can only say that they are not more severe than true, and the facts remain in attestation; but I would not be misunderstood. I have no hostility whatever to Catholics personally, though I wage war against Catholicism as a system: on the contrary, I should rejoice, were it in my power, by any means, to emancipate them from a thralldom worse than Egyptian darkness, when no man knew his brother.

It will easily be seen, that I have not canvassed with a curious eye, the movements of state machinery, because I have not studied the polity of nations, nor the complicated tactics of international rule—things that

“ Divert and crack,
The unity and married calm of states
Quite from their fixture.”

I am, however, a warm friend to the diffusion of useful know-

ledge, subordinated to the inculcation of religious principles ; nor would I construct my " Atlantis " on the fictitious basis of Owen's " Eutopia," which appears to me as false in principle as it is inoperative in practice, and proceeds on an assumption at once gratuitous and contradicted by the experience of ages.

I regret that my time, and the advanced state of the season, did not permit me to skirt the foot of the Jura, and traverse the Grimsel, by the Pass of St Gothard, or to thread the Cantons of Tessin, the Grisons, St Gall, &c. via Shaffhouse, and the Falls of the Rhine,—but " non omnes omnia possumus."

My little volume, for in size at any rate it is unpretending, may be pronounced a singular and somewhat curious *melange*, and this is not denied ; it was intended to be neither entirely scientific, nor altogether commonplace, but to contain what might be esteemed interesting to various tastes. I wish the whole were much better than it is, and more worthy of acceptance with the public. Such however *as it is*, " THE GLANCE OF SWITZERLAND " is respectfully submitted a candidate, if not for popular favour, at least for a generous reception.

J. M.

EDINBURGH,
1st April 1829.

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A
GLANCE
OF
SWITZERLAND.

CHAPTER I.

INTRODUCTION—GENEVA—EXCURSION TO THE
VALLEY OF CHAMOUNI—MONTANVERT AND
THE MER DE GLACE.

TAKING it for granted that the greater part of my readers have seen Paris, as a matter of course, and visited *Père la Chaise*, the *Jardin des Plantes*, and the other marvels of the metropolis, for the full account of which “PLANTA’S Guide to Paris” is an ample directory; and as the subject is trite enough, I shall conduct them at once to that land of romance, Switzerland, and, by my title page, the *land of promise*; deeming it altogether superfluous to enter upon a description of the parade and paraphernalia displayed on the

entré du Roi, CHARLES X. into his good city of Paris, after being crowned and installed, with all due form and ceremony, at Rheims, King of France and Navarre. Suffice it then to say, that, after having, *propria persona*, witnessed all this state pomp, we were *transported*, as travellers generally are, by the *voiture publique*, to Geneva, in the usual period of four days and four nights, amid whirlwinds of dust, and the intense heat of a more than ordinary summer's sun, the tedium of the route being unrelieved, until we arrived at the limestone mountains of the Jura, invested with all their geological and botanical interest,—since for me the scenery of France is void of charms, destitute alike of the peasant's hamlet and the mansions of the great; neither pretty pleasure-grounds decorate the landscape, nor “beauteous semblance of a flock at rest” is seen. The fields of France are naked and cheerless, and the woods are mantled in more than forest gloom, while the villages we pass through seem desolate and forsaken. My readers must also forgive me if I say but little even about Geneva—its republic and its inhabitants, and their clock and watch making *propensities*, as the phrenologists would term it—the costume of the canton—the edifices of the city, its arts and manufactures, its literature and its science. All these are very generally known, and have form-

ed the theme of many a writer ; and I would not injure such portraits by any pencilling or colouring of mine. Besides, Geneva is not a city à *mon gres*, nor would it, even with my pretensions to the character and habits of a citizen of the world, be selected as my domicil. I do not admire its religion, notwithstanding its pretensions to the *morale* of christian ethics. I think I see "Ichabod" written over the cold formal walls of her sanctuaries, in despite of the affected sentimentalism of her pastors ; and fear that, in this point at least, the converse of the motto of the city's escutcheon, "*Ex tenebris lux*," is unhappily but too true.

About 3 o'clock P. M. on Saturday 18th June 1825, we arrived at the gates of Geneva, where we and our luggage were subjected, by the Cerberus and two soldiers, to much unnecessary detention. It was our duty, as we were informed, to exercise patience, and submit to scrutiny, however impertinent, and curiosity, however vulgar, insulting, or long continued. At length the preliminaries of our *entré* having been arranged, we proceeded to the "Hôtel de la Balance," in the fond hope of enjoying repose after our varied fatigues ; but here we had to hold a *levée*. The first character that was formally announced, or rather that acted on self introduction, was "La Blanchisseuse, Madame." It

was certainly well she announced herself, for we could never have guessed her avocations from her appearance. Being Saturday, perhaps the week's work was ended, for the lady entered in full dress : hair decorated in Parisian fashion ; low gown, with a handkerchief somewhat elegantly thrown over her shoulders, short sleeves, and long white gloves. This prologue was followed by *garçons*, eager to engage their *char-à-bancs* for excursions in the environs.

The following day we attended M. MALAN's neat little chapel *extra muros*, he not being permitted to exercise his pastoral functions within the city, from his adherence to what is commonly termed *evangelical* sentiments, and his refusal to subscribe to a document drawn up and sanctioned by the " venerable compagnie ;" the essential character of which was, the imposition of an interdict involving the great doctrines of christianity, and, though certainly not *totidem verbis*, yet unquestionably by implication, including a denial of the divinity of CHRIST. But this is not a place to expose the sentiments of religion, now generally prevalent here, or to entangle myself in a fruitless controversy.

On Monday we perambulated the city, which certainly has very little, as a city, to recommend it. It is characterized by much active industry within doors, the *sçavans* and *mecha-*

niciens being pent up in their closets and ateliers; and very little gaiety pervades the promenades. Some parts of the town are sufficiently picturesque; the overhanging roofs, for which it is remarkable, are, however, too lofty to screen the pedestrian from the rain, especially if accompanied by a high wind, and form no shade from the sun. The pavement of the streets is bad, and their irregularity is a considerable drawback from the internal appearance. The pavement of the inclined plane in the Hôtel de Ville, by which we gain the arduous ascent that conducts to the Passport Office, is a curiosity of its kind, and perhaps unique. The city is tolerably well fenced in with walls within walls, draw and suspension-bridges, and gates; while stakes and chains secure from surprise on the part of the lake. The small canton of Geneva, though in the vicinity of the great Alpine chain, and the mountains of the Jura, includes no mountains. The name of the city and canton has been traced by the etymologist to a celtic origin; *Gen* a sally-port or exit, and *av* a river, probably because the Rhone here leaves the Lemman lake. The eagle on the escutcheon of the city arms, indicates its having been an *imperial* city; and it is believed the key was an adjunct of Pope MARTIN V., in the year 1418. The motto on the scroll "Ex tenebris lux," ap-

pears to have existed anterior to the *light* of the Reformation. The number of inhabitants may now be estimated at about 22,000; but it appears, by a census in 1789, to have been 26,148. In this *moral* city, it is computed that every twelfth birth is *illegitimate*. The number of people engaged in clock and watch making, and jewellery, may be safely rated at 3000. In years favourable to these staple manufactures, 75,000 ounces of gold are employed, which is almost equally divided between watches and jewellery. The daily supply of silver is about 134 ounces. Pearls form an article of considerable value in the jewellery, and have been rated at no less a sum than 1200 francs daily. 70,000 watches are annually made, only one-twelfth of which are in silver. More than fifty distinct branches are comprised in the various departments, and each workman on the average earns about three shillings a day.

The constitution of the canton of Geneva was accepted by the Genevese on the 24th August 1814. The sovereign power is vested in a representative council, four syndics, a council of state, and four tribunals for the administration of justice.

The Rhone and the Lake mingle their interest in the picture, and give it a character which would not otherwise be possessed. The frame-

work cast across the former, with wash-houses, baths, mills, machinery, wooden-bridges, and all the natural and artificial associations connected with the edge of such a lake as that of Geneva, and such a river as that of the Rhone, cannot fail to interest and amuse for a time. The waters of the Rhone possess a fine blue tint, from what cause it is not easy to determine. It divides the city into two unequal parts, and, at about three-fourths of a mile distant, encounters the *Arve*, which springs from the Glacier de Bois, in the vale of Chamouni. The confluent stream, now turbid from the junction of opposing waters, after traversing a gap in the chain of the Jura, and suffering a temporary eclipse by plunging into the earth, and rolling through a subterranean tunnel beneath the valleys of Savoy, at length enters the territories of France.

Near the *Boucherie*, on the wall which fringes the lake, we observed cages containing three remarkably fine living specimens of the golden eagle (*Falco chrysætos*). They differ somewhat in their plumage, but it seems highly probable that the only difference between the common and the golden eagle arises from *age*, and we are inclined to concur in the opinion of their identity; at any rate, "*non nobis tantas componere lites.*"

Several migratory birds visit the Canton. The

Merops Apiaster is rare, but the cuckoo pays her annual visit. The "syren of Italy" too, serenades the grove on an occasional excursion. The gourmand and epicure are seldom feasted on the *Ortolan*, whose visits are like those of "angels, few and far between." The nightingale and the goatsucker are more regular in their intervals of return. The pelican and the cormorant sometimes grace the banks of the lake, and the wild swan is seen to glide on its surface. The Lake of Geneva is about 1126 feet above the level of the Mediterranean sea, and is well supplied with fish, in vast variety, especially of the genus *salmo*, including the diversity of trout and the *cyprinus*, or those of the carp and tench kind:—the eel is rare. The most interesting phenomena connected with its geology are unquestionably the boulders, pitched on the *Saleve* and *Voirons*, and scattered here and there on the borders of the lake. That the angles of the granitic block have been abraded is obvious, but the power which has effected it is by no means easily ascertained, and involves one of the most curious problems in geological science, namely, their transport. Valleys intervene between their original site and the elevated plane where they now repose. The Merino sheep were introduced into the Canton in 1799, and several fine flocks adorn the agricultural districts. The vineyards

yield an annual return of about one million gallons of wine. In some of the woods, that pretty plant the dog-tooth violet is seen, and the meadows disclose some interesting *orchideæ*. On the hills among other interesting plants may be found the *Ornithogalum pyrenaicum*, *Trifolium incarnatum*, *Vinca major*, *Geranium sanguineum*, &c., and near to Dole the *Orobis luteus*, a plant rare even in Switzerland : also the *Androsace villosa*, which is curious for its change of tint ; the central star in the flower, at first green, becoming subsequently yellow, and finally flesh coloured. This brief summary proves that the canton is not without its interest and its charms, and the city can boast of its wise men, men of no ordinary caliber in the republic of science : a DECANDOLLE, a JURINE, and others, support her pretensions to this distinction. The Botanic Garden, Libraries, and Cabinets of Natural History, are sufficient to gratify the most fastidious taste.

Having engaged a char-à-banc for Sallenche in Savoy, for twenty-four francs, a distance of thirty-six miles, we left Geneva to explore the wonders of the Valley of Chamouni, and had to apply, even for this limited excursion, for our passport. The greater part of our luggage was left behind, and we had no cause to regret it, for the emissaries of the Crown of Sardinia, stationed on the Frontiers of the Canton, execute

their commission in a manner the most severe and revolting. We witnessed some very rudely handled, the sacks probed with a long iron spear, and sometimes their contents emptied on the public road. We were amused, especially, by their officious scrutiny of books, which, however, their ignorance cannot decypher. The *bible* is the chief object of their violence, and should it be discovered, it is immediately made lawful seizure, and of course destroyed. One English gentleman, we were informed, on whom this volume was found, was actually obliged to retrace his steps.

Unfortunately the day proved wet, which was a great drawback to our enjoyment; but after winding through a most interesting valley along the meanderings of the Arve, with mountains on the right and on the left, we at length reached Pont St Martin, where Mont Blanc, clothed with the snow of centuries, stood in terrific majesty before us. We reposed for the night at the Hôtel de Belle Vue at Sallenche. The landlord is a great rogue, as appeared in the sequel; indeed, we had practical evidence of it, and are inclined to give preference to the Hôtel de Mont Blanc, Pont St Martin. I had set out in quest of a char-à-banc for Chamouni, and in my rambles encountered a procession, with the host elevated, the retinue, bare headed, and a bell announcing its approach—the summons for prostration. As I was a

“wayward wight” in this respect, and did not care to pass the cavalcade, I turned my back, and leisurely walked as a kind of pioneer to the inn; my hat, to the annoyance of the “faithful,” remaining in its proper place, and my ear deaf to the execrations by which I was assailed. I know many would have had no scruple in this matter, but in my mind, in whatever way it may be regarded by my readers, it was a deep rooted conscientious principle that admitted of no compromise. The church at Sallenche is, as Catholic churches generally are, tinselled and tawdry, a melange of rags and ribbons. From our inn we had a fine prospect of Mont Blanc, and many a surrounding mountain. Before our window rose a towering pyramid of aiguilles, whose top mingled with the clouds that flitted before its awful front, and seemed to shut us in by an insurmountable barrier. During the night, the sky sparkled with a thousand glories more than we had been wont to contemplate; and the solemn mountain, which bounded our vision, was girded by a zone of clouds, its dome stretching to the skies.

On our road to Chamouni the following morning, we turned aside on the left to visit the fall of *Chede*, and were conducted by an old female, with a group of children. The ascent was tolerably steep, and not a little difficult to those who were unaccustomed to scale the mountain acclivity.

On the left the torrent rushed past us with considerable impetuosity, struggling for its freedom to join the Arve in the valley. The cascade is fine and much broken in its fall, and a rainbow rose on its bosom. In our progress thither, we observed several interesting plants, such as the *Rosa cinnamomea*, *sea buckthorn*, *juniper*, *tamarix*, *spirea*, &c., and, on looking round to contemplate the alpine picture we had just left, a singular and beautiful scene presented itself: a dense cloud formed a rouleau or band on one of the mountains, and the sun-beams reflected from its surface, sparkled with intense radiance. On our descent from the fall of Chede, we observed the *potentilla*, *aquilegia*, *cisti*, &c., together with the daisy, pleasing from association. About half way to Chamouni is Servoz, where we remained a short time to survey the picturesque and sublime mountain scenery, by which we were surrounded. There is a small collection of objects of natural history adjoining the inn, consisting of mocha stones, onyx necklaces, rock crystal cut into various forms, as well as agate, horns of the chamois goat, collections of alpine seeds and herbaria of various parts of Switzerland. Their local interest added much to their value. Here I purchased a beautiful green tourmaline *in situ*, the crystal every way perfect. The road from hence becomes more

and more romantic, frequently traversed by the foaming torrent. Deep embosomed among mountains, many of them sombre from their garniture of pines, rolls the river Arve ; the alpine scene is in other parts relieved by the *Pinus Larix*, surrounded by a canopy of the cembra pine, forming a buttress to the line of perpetual snow. On the right towered Mont Blanc, in dazzling whiteness,—in silvery majesty, crowned with imperial snows. We passed a very romantic bridge, cast over a torrent, that rushed forward with fearful impetuosity, and tumbled to an awful depth beneath us. The prospect up this vast chasm was exceedingly striking : the slightly inclined alpine walls were clothed in a living robe of pines, while here and there the common birch or hazel relieved the monotony ; and high above all we perceived a magnificent casque of weeping birch, waving in the breeze, and imparting much majesty to the wondrous scene. On our route we were followed by the children of the valley, with fragments of rock-crystal, flowers, specimens of the libellula, and various beetles, still writhing on the pin by which they were trans-fixed. Elsewhere, we were presented with a draught of ice cold-water from the crystal springs, or with alpine strawberries and cream. Here and there the mountain torrent is turned to account in being directed to machinery con-

nected with saw-mills, which are numerous and necessary, and are of the most simple construction. On turning round angles in the defile, we either pounced suddenly on a saw-mill or on some cottages, grouped or insulated, almost all of them supplied with apiaries. The Poland, or log hive, is universally used. The honey of the valley of Chamouni is considered remarkably fine; the very name is a sufficient note of recommendation. The roofs of the houses, though occasionally of tile, are more frequently covered with flat slips or plates of wood, the general material of the houses, at once stout and neat in their structure. After having passed on the right the Glacier de Boissons, where the intrepid SAUSSURE ascended Mont Blanc, we met with CHARLET, one of the guides of Chamouni, who presented his album of credentials, where, among others, we found the following testimonial.

“ JOS. CHARLET would have made an excellent study for SALVATOR ROSA. But he is an honest good fellow, particularly attentive, full of anecdote, and as strong as HERCULES.”

Such an individual was not to be lost sight of, and he walked by the side of our char-à-banc to the Hotel de l'Union, at the village or *prieuré* of Chamouni, where we arrived at 3 P. M., and, after having made our arrangements for that perilous enterprise, an excursion to the *Jardin*,

amid the terrible glaciers of Talefre, after traversing the Mer de Glace; and selecting our intelligent accompaniment, JOSEPH CHARLET, "dit le doyen," as our chef-guide, we left the valley at five for our ascent of the Montanvert. After traversing several meadows, we had to thread our way through woods of pine,—enjoying from various points of ascent the fine views of the valley far beneath us. Opposite to us was an alpine ridge parallel to that we scaled, with the insulated challet called the *Chapeau*, like an eagle's nest perched on high, the residence of a shepherdess of the Alps. Mules are usually taken to the mountain, but we much preferred to walk, the foot-path being in places very steep, and difficult of ascent. About half-way up, there is a kind of resting place by the side of a mountain rill, where we halted for a few minutes to allay our thirst. We had nearly gained the summit, when an eagle hovered over us, soaring in the empyreum. We arrived at our destination at eight o'clock, having occupied three hours in the ascent. The thermometer then stood at 46° Fahr. This mountain is interesting for its vegetation, and, among its *Flora*, the following may be mentioned; *Anemone hepatica*, *Viola biflora*, *Primula viscosa*, *Potentilla aurea*, *Azalea procumbens*, *Ranunculus glacialis*; also the *Pteris crispa*, and the *Lycopodium clavatum*, or club-

moss. Even the very margin of the Mer de Glace was beautifully fringed with the *Rosier des Alpes*, (the *Rhododendron ferrugineum*), and the *Soldanella alpina*, including the *minor* sort, most of which were in full flower. The rose-coloured blossoms of the former, with the intense blue of the latter, sprinkled here and there in rich profusion, formed a beautiful enamelled carpet, rendered much more interesting and curious, from its extraordinary contact,—an icy sea. The blue tints on alpine elevations attain a depth and intensity scarcely credible to those in the plain, and we are persuaded that this does not proceed from any visual aberration, but is a real and virtual phenomenon, which a cyanometer would certainly substantiate. On this verge, too, we perceived the *Cerastium lanatum*. Having reconnoitred our extraordinary situation, we examined the shepherd's challet, at a short distance, which we found a mere projecting rock (art having been but little concerned in its construction), with a few loose stones huddled together to form the front; but neither a security against the mountain snows, which are frequent even in summer, nor a shelter from the piercing wind; yet here the hardy mountaineer, his brawny limbs braced by the alpine breeze, finds sufficient repose, and circumstances which would soon consign to the arms of death the

waxen imagery of the greater part of the population of the metropolis of England, seem but to afford him strength and energy.

Having glanced over the cases which contained the display of cut or polished stones, minerals, &c. a rude alpine repast was spread out, and though the board was not furnished with delicacies, the unsuspected but real cause of the numerous diseases which luxurious life is heir to, our appetite was enhanced by the bracing air which breathed around us, and imparted a relish otherwise unknown.

Our arrangements had been made to remain for the night in a challet (elevated 2568 feet above the valley, or 5724 feet above the sea's level), in order to gain sufficient time, the following day, for our fatiguing, lengthened, and dangerous enterprise, for such we really found it. CHARLET stayed with us, and two other guides were to join us at day-break on the following morning, with the requisite supply of wine and provisions.

The only couches we could boast of were the wooden benches or seats at each side of the table, but not having even a blanket to keep us warm, we preferred to sit up, as close to the fire as possible, and nurse the dying embers; for as they are not often favoured by the company of nocturnal visitors, the supply of dried wood intend-

ed for the next day's fire was soon exhausted, which was a sad misfortune to us; for at best fires in these elevated regions communicate but little warmth, from the extreme rarity of the air. During the night, the thermometer fell to a few degrees above freezing, a sufficiently rapid transition for us, for when we left the valley it stood at 65° Fahr. The night was clear and cloudless, and the sky above our heads was gemmed with stars innumerable, sparkling with a light so vivid as to defy comparison with the scene witnessed on the level of the sea, or amid the dense and vapoury atmosphere of Britain. It was indeed "a new heavens and a new earth." Below our station lay extended the Mer de Glace, with all its icy imagery, its *avalanches*, its *glaciers*, its *boulders*, and its *rocky torrents*, terminating in the Col des Geans, and resting on Mont Blanc. Before us rose the Aiguilles de Dru, towering to the blue vault of Heaven, and partially wrapped in a mantle of clouds pierced and overtopped by their peaked and pointed summits. On Thursday morning, at a quarter past four o'clock, the thermometer had risen to 42° Fahr., and we soon after descended the mountain steep to the Mer de Glace, our other two guides having joined us from the valley, carrying provisions in knapsacks on their back. Each of us was supplied with a pole about

seven or eight feet long, with sharp iron spikes, to strike into the ice; but we declined the precaution of *cramp-irons* being screwed into our shoes, nor does there seem much necessity for such pointed appendages, the ice we had to traverse being rough, with solitary exceptions, and those of unfrequent occurrence, though the shoes of our guides were well supplied with nails.

In the midst of our rapid descent, we seemed all at once to come to an interminable barrier, and our progress received an effectual pause, by an immense wall of rock, but slightly shelving. To the surface of this rock we clung, supported by our guides, and impelled by them in a lateral direction, the slips in the rock serving as *points d'appui* for our hands and feet; the whole *mænœuvre* being in direct violation of the laws of gravity. Having, however, at last gained a firm footing on the Mer de Glace, we proceeded; but during the night the ice had yawned, doubtless from the infiltration of water, and subsequent expansion in the act of freezing; and the difficulties increasing at every step, we found it necessary to call a halt, and hold a consultation on the best means of advance. One of our guides went forward to explore, and we progressed slowly. He shortly afterwards rejoined us, and while Mrs M. walked in advance between two

of our guides, CHARLET and PIERRE COUTET, I followed with BALMAT. Before we could gain a level surface, it was necessary to clamber up a vertical wall of ice, about thirty feet high, the guides having cut footsteps in the façade, we formed a living chain, and at length stood on its top; and after many ups and downs of the same kind, gained the centre, where the rents, though profound, were less frequent, and not so wide. In some of these we observed fine groups of icy spiculæ, the consequence of the crystal-line arrangement of the preceding night, and the walls of the chasms shed a refreshing light, the effect of the exquisite *aqua-marine* tint which invested them. Our path was sufficiently curvilinear and zig-zag, from the numerous and formidable obstacles which opposed our progress. About nine we gained a resting place, among some fragments of rocks which had fallen from the surrounding aiguilles, and having taken refreshment, resumed our advance; but before we began an almost perpendicular ascent, to an elevation some thousand feet above the plane of ice we had traversed, we were obliged to wind round an angle, on the vertical face of an elongation of the *Aiguilles de Dru*. This steep path was rocky, and so far afforded a firm footing; but it did not exceed fourteen inches in breadth, and as it was necessary to in-

cline the body, which then overhung a precipice of five hundred feet in perpendicular depth, the progress was perilous in the extreme. One of the guides, however, having passed, the extremities of a pole were held by a guide at each end, and we, by the assistance and support of the third, at length gained the opposite side. As I passed, I instinctively shuddered; but it was necessary that I should suppress any expression of the emotions I often felt. We had now to scramble up among rugged rocks, and their debris, peat-earth, arising from the decomposition of mosses and lichens, and some patches of grass; but these were thin and bare, scarce affording, even amid the days of summer, pabulum for the marmot, much less for the chamois. Here, however, we found the *Salix helvetica*.

It became oppressively hot, from a combination of both direct and reflected heat. The day was delightful, and the heavens serene, and if there had been clouds, we were far above their station, and the usual region of the tempest and the storm. We left our cloaks, and the guides disincumbered themselves of their baggage, soon after we had surmounted the rock which overhung the dangerous pass we had left below.

Having scrambled over a somewhat steep and

rugged mountain, we arrived at an immense torrent of gigantic rocks, which seemed to have been dashed from the alpine heights which still towered above us. Our motion over this new obstacle was slow and snail-like, and many an up and down characterized our progress. Afterwards, we wandered among the insulated pyramids of ice of the glacier of Talefre, some of which were of a magnitude truly terrific, and seemed like emmets at their base, while they gloried in their height sixty or seventy feet above us. Our subsequent path conducted over an avalanche, which lay asleep on the side of the mountain, and some recently fallen snow, into which we repeatedly sunk nearly to the middle. After a few more struggles, we gladly scaled our point and resting place, the *courtif* or *jardin*, a curious oasis in the glacial desert. The *aiguilles* of the Glacier of Talefre in the Mer de Glace are enormous, and among them rises a vast rounded rock, covered during July and August with plants and flowers. The following comprises nearly the entire of its interesting flora. *Juncus Jacquini*, *Silene acaulis*, *Gentiana nivalis*, *Achillea nana*, *Cardamine alpina*, *Trifolium alpinum*, *Lichen nivalis*, *Pedicularis rostrata*, *Senecio inermis*, and *Geranium nodosum*. At this our greatest elevation, the thermometer in the shade was 64° Fahr., and in the crystalline water,

which bubbled from beneath the avalanche in its vicinity, 33°. Here we rested for some time, and took refreshment, which indeed was sufficiently acceptable. We had a small flask of brandy, as well as the wine which the guides carried with them, being fearful to risk the beverage of ice-cold water after the feverish excitement which such an extraordinary excursion necessarily produced. Amid these awful and icy solitudes, no voice was heard but our own. The stillness of death reigned around, save only that it was, at distant intervals, broken by the shrill signal of alarm given by the sentinel stationed by the marmots at their outposts, or the thundering crash, announcing the fall of a distant avalanche, or the rending of the mighty glacier. In this vast amphitheatre, walled in by mountains of snow, here and there penetrated by the peaked summits of their aiguilles, reigns an eternal winter, the accumulated snows of many ages, the wreck and ruin of rocks, and all the magnificent personification of dread desolation. Far beneath us lay, in all its vast dimensions, the Mer de Glace, its monotony only relieved by the pyramids of ice, the boulders and the fragments of rocks on its surface, as if scattered by some giant arm. Almost *en face* rose the Col de Geans, and at its side Mont Blanc, towering in stately form above the other Alps.

————— “ Monarch of mountains !

They crowned him long ago
On a throne of rocks, in a robe of clouds
With a diadem of snow.
Around his waist are forests braced,
The avalanche is in his hand.”

There is something in the awful solitudes of mountain scenery which moves the soul. The world far beneath is shut out from the gates and avenues of her contemplation, and she seems to hold converse with ærial beings. The philosopher, wrapped up in the mantle of thought, is lost in his abstractions, and the christian cannot forget that, in regions such as these, many of the sublime and awful mysteries of his religion were transacted. Over these frozen and snowy cloud-caped regions hovers the *Laëmmmergeyer*, that terrible of birds, which often alights from his skyey elevation, to give chase to the agile chamois, which, bounding from rock to rock, is forced at last to yield itself a prey to this condor of the Alps, which is often found to measure from tip to tip of the wings, when outstretched, nearly sixteen feet. In our return, we passed two pools of water on the surface of the Mer de Glace, and numerous fragments of granite, mica-slate and rock-crystal scattered here and there. Some stones had penetrated deep into the ice; and, by absorbing and retaining heat from

the sun-beam, in virtue of their opacity, sunk in the transparent medium by which they are surrounded. They afforded me a practical hint, which, though still unmaturing, may ultimately be of extensive and varied application. We also observed at the sides of the mountain several excavations, the work of the marmots. These little creatures may be termed regular hay-makers. They bite off the grass, and turn and dry it in the sun-beam, and it is even said that one of the party lends himself to be loaded as a cart for the transport of their provender. The Alpine marmot inhabits the highest acclivities of the Alps, and forms societies varying from five to fourteen in number. When basking in the sun-beam, on some ridge or green patch, a sentinel in advance whistles on the approach of danger,—a signal for the whole party to retire into their nests, which are curiously lined with moss and dried grass. They finally withdraw into their abodes in the month of September, and remain torpid till March following, and during this time the entrance is plugged up with earth. They are occasionally dug out in winter: the flesh is esteemed by the peasants, who frequently eat it, tender and delicate: the skins are valuable, and the fat is by the Savoyards held to be medicinal.

The ice of the Glaciers resembles consolidat-

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ed frozen snow, and is rough, especially on the summit of lofty mountains ; but it becomes more transparent and icy in its texture in the lower glaciers, and as we descend into the plain. The great danger of traversing the *Mer de Glace* consists in the difficulty of pronouncing on the *solidity* of the snow. When it assumes a *yellow* tint, it is considered comparatively safe ; and here the great experience of the guides is called into exercise, because the ice is incessantly opening and exposing chasms, which are often concealed by a mantle of fresh fallen snow, and an individual may, by one incautious step, be precipitated beyond the hope of recovery. In one instance we sunk to the depth of several feet. The guides, however, keep a sharp look out, and are ever on the alert to rescue those committed to their charge. They make it imperative that not one step be taken without their express sanction : and it is essential to personal safety not to leave them for a moment. CHARLET told us, that, though we were their masters in the valley, they were ours on the ice, and amongst the rocks. Indeed we had no inclination to stray, being glad enough to keep a firm hold of them.

In many places we found that the sun-beams had formed rivulets in the ice, where we quenched our thirst, which was excessive, as every one in the ascent of mountains must

have experienced. It is worthy of particular remark, that ice-cold water, when taken at these elevations, and under ardent excitement, does no harm, as might be expected from the inflammatory tendency to which the system under such circumstances is exposed. I was determined to resist as long as possible the burning thirst that pressed upon me, and ultimately it entirely went off. I feel therefore confident, that, by resisting it in the first instance, its painful attacks may be altogether overcome, and that the more it is indulged the more intensity it acquires. We paid a visit to the "Moulin," with its revolving cascade. It is probable that this curious assemblage of water never freezes, its rapid motion preventing it. It tumbles with a tremendous noise to a vast depth, and flows under the Mer de Glace, issuing from the façade of ice at the source d'Averon.

We ventured to look down some of the yawning chasms, and, by casting stones, and observing with a stop-watch, the interval of time before the sound reached the ear again, I should state the depth at from 100 to 200 feet. SAUSSURE rates the general depth at from 80 to 100 feet: some have estimated the depth of the Mer de Glace at 600 feet. In two instances, to save a circuit, our poles were placed across the chasms, and with the assistance of a guide at each side

we walked over them; but this was very hazardous, for had the ice given way, or the poles broken with our weight, there was no possibility of being rescued from immediate destruction.

On our return to Montanvert, we had to make a circuit of some miles, the ice having, during our absence, opened a terrific chasm, too wide for us to pass. We met with a repetition of our former difficulties, and some additional ones arising from our varied path, and had to clamber over a vast multitude of enormous boulders; but finally we scaled, without ropes or ladders, its summit, where we found a party seated at their ease, and enjoying from thence the fine view of the Glaciers, and the snowy furniture of the Alps around them. 4 o'clock P. M. the thermometer was 65° Fahr.

The fragments of rocks that are scattered over the surface of the Mer de Glace, are found occasionally rounded and abraded, from their having been rolled in their precipitous descent from their eagle elevation, detached either by an expansive force, arising from the congelation of water, or shattered by the electric bolt of Heaven. Such masses, tumbling headlong from their elevated regions, must acquire a tremendous impetus, and would be hurried onward to a vast distance on the frozen plain;

but the *torrent* of rocks and stones, of frightful magnitude, and most extensive numerical array, in the vicinity of the base of the glacier of Talefre, can, I think, be only rationally accounted for on the supposition of the rupture of a waterspout, by an accidental contact with some of the sharp points or salient angles of the Aiguilles de Dru, &c. The singular pyramidal structure of the aiguilles of the glacier, and their insulated form, and detached relieve, is a phenomenon at once extremely singular, and difficult to explain. It seems to be the effect of a solvent power in the atmosphere; in the same manner as sticks of potassa in the act of solution are abraded equally around, and form delicate and lengthened tapering cones; or as an amorphous mass of alum, allowed to remain in water, after many days discovers a pyramidal form, encrusted with octahedral crystals in relief.

It seems by no means doubtful that the glaciers do advance into the valley; nor does it seem very difficult to account for such a progressive tendency. Water, we know, from 42° downwards expands, the expansive power increasing in the ratio of the decrease in temperature. During the day, a portion of the surface is thawed, and this liquid water filters through the ice. By the nocturnal cold this

water freezes, and, as by the power of a wedge, the great mass is rent and separated. This dislocation, frequently repeated, by a repetition of similar agency, pushes forward the great body of ice. The lower parts of the Mer de Glace are thus of necessity impelled toward the valley of Chamouni, to which it declines, and where there is no resistance to oppose its progress. The Mer de Glace abuts on the Col des Grands, and on the acclivity of Mont Blanc; while towards its embouchure it is flanked on the one side by the rocky walls of Montanvert, and on the other by those of the Aiguilles de Dru. This separation will also account for the movement of the boulders which rest upon it; while there still remains another circumstance, which will contribute its share in the *glissement* to which we refer, and that is, the water from the *moulin*, which, after having penetrated the ice, and rolled along its subglacial channel, will necessarily fuse the ice in contact, and the glacier will sink in that direction, which will be at a maximum at the source d'Averon, the outlet of the water which flows from the glacier. Thus an inclined plane will be provided for the gradual advance of the boulders towards the valley. It seems, too, highly probable that the bed of the water under the glacier is always maintained, even in winter, above a freezing tempe-

rature; and that, under such circumstances, there is many an icy cavern and dome beneath.

We arrived safely at the village of Chamouni at 7 o'clock in the evening, after having walked that day about *thirty-nine miles*, according to the calculation of our guides, the greater part over ice, snow, glaciers, boulders, and façades of ice and rock, forming walls some hundred feet high. We were exceedingly amused with the contention among our guides as to the priority of walking into the village with Mrs M., who still continued in advance. Their colloquy was kept up in their *patois*, or peculiar dialect, but we gathered sufficient to ascertain the cause of contention. When we arrived, we were welcomed by crowds. It had been prophesied that it was impossible Mrs M. should be able to overcome the fatigue and difficulties; and our guides had won an additional laurel in consequence of their success, this enterprize being second only to the ascent of Mont Blanc, and has been adopted by the few who have successfully reached its summit, as preparatory to that most perilous undertaking, and as a kind of training for it. We were of course ignorant of what lay before us, quite sufficient to put manly courage to the test, much more female heroism; but the difficulties were disguised from us, and must be our apolo-

gy. It gives them great distinction, and becomes their boast, when they can register in their roll of fame so rare an event as conducting a lady to the *Jardin*, and her safe return, being only the fourth female who had accomplished this feat. Due arrangements, however, had been made to pitch our tent for the night on the Mer de Glace, had exhaustion rendered it necessary.

When we got to the inn, Mrs M. took a warm bath, and neither of us felt the least subsequent lassitude. A few miles' excursion in the plain would have wearied us far more, so extraordinary is the difference between the bracing elastic atmosphere on these altitudes, and the dense vapours which lie stagnant in the valley.

The guides are bold and intrepid, cautious and intelligent, faithful and honest, hardy as their native mountains, and as firm footed and agile as that pretty antelope, the chamois, which inhabits these regions. The guides of Chamouni are, moreover, possessed of a vast fund of information, and even a considerable store of scientific lore, especially that connected with botany and mineralogy. In their address they have much politeness and courtesy; and though, among themselves, they employ a very peculiar dialect, they speak French in their intercourse with strangers at once with elegance and ease. This character is certainly an elevated one, but

justice demands its application ; and, in spite of the interdict of Sardinia's king, and his Reissendi, it is impossible to believe (judging from the intelligence we had an opportunity of proving) otherwise, than that they not only read and write themselves, but that they instruct their children in both.

To attain the summit of Mont Blanc is the acmé of their ambition. JACQUES BALMAT was the first to pace the hitherto untrodden snows of its summit, on the 5th July 1786, with two other guides ; and next, on the 8th of August following, with Dr PACCARD. Through the medium of CHARLET, our chief guide or captain, we received much interesting information as to the regulations to which the guides of Chamouni are subject. When employed in the common routine, they receive six francs per diem, but in any tedious or hazardous expedition, as the "Jardin," for instance, each receives nine francs or more, as the danger is increased. Government obliges them to contribute half a franc from every six they receive, toward a fund, the object of which is to support them and their families in the event of sickness, or when incapacitated, from old age or infirmity, to traverse the mountains. If they take any stranger to such a distance as to be unable to return the same night, their expences, at an inn for ex-

ample, which may amount to three francs, are an entire loss resting on themselves, as no extra demand can be levied from the traveller they conduct. The number of guides at Chamouni then amounted to forty, who are obliged regularly to take their turn in conducting strangers, unless one is particularly singled out by the individual, and under such circumstances he can only go as captain over the others, who then take their place in rotation; and, thus selected, they dare not refuse to go, however hazardous be the enterprise, unless by a parley with their fate they are willing to incur the penalty annexed to such a refusal, which amounts to forty francs. Their services are only required four or five months in the summer. They are not allowed to conduct strangers over any mountain out of their own district, without paying a fine of thirty francs to the government of the vallais to which the surrounding mountains belong. Each is obliged to devote two days in the season to the repair of the roads, or pay a fine of ten francs, unless he find a substitute. The inhabitants of Chamouni are prohibited from cutting down any trees but those marked by government, and even such they have to pay for. Each family kills their own meat in autumn, to serve for the succeeding twelve months; part is preserved in a frozen state, and the rest salted.

During their long and severe winter they are chiefly confined to their habitations, their time being occupied in the repair of their miserable huts, mending their clothes, cutting wood for fuel, or making a few rude household utensils, &c., while the women are usually employed in knitting and spinning. Nor is the instruction of their children forgotten. Each guide is allowed to keep *one* mule for his own use. Strangers are supplied by the neighbouring peasantry, and pay six francs per day. The sagacity of the mules, though the very name has been proverbial for obstinacy and stupidity, is very remarkable in being able to find their way after having once traversed any road. CHARLET related an instance of it in the case of one of his own. He had occasion to pass a mountain, in a night so dark that he could not discover the path, and was obliged to trust himself entirely to the conduct and guidance of the mule; and though the animal had only been once before in that direction, it never missed its footing, conducted him in perfect safety, and even stopt at the door of the inn at which it had rested before, though the interval was nine years. When traversing mountain ridges, I have often observed evidences of caution and security; and in these invaluable properties the mule stands pre-eminent,—qualities which can only be duly appreciated by those

who have been accustomed to witness their firmness and caution on the edge of precipices, in devious paths, or in traversing dangerous mountain passes, on the verge of projecting rocks, or over some rude plank thrown across the horrid chasm. This much in justice to a much traduced animal, whose courage, steadiness, and calculating prudence, are truly wonderful.

At 10 o'clock A. M. on the following morning the thermometer was $63^{\circ} 75'$. We left Chamouni on our return to Geneva at 11 o'clock; and, in the mean time, employed ourselves in glancing over the album at the inn, where strangers are requested to register their names, and have an opportunity to record any interesting event, or indulge in some *jeu d'esprit*. Among the latter class, we were amused with the following, which seems well told.

“ The following lines were copied from a pocket-book found near the foot of the Montanvert, and supposed to have fallen from the pocket of a dandy, who was observed to make an avalanche near this spot. It is conjectured, that he had ventured from his chambers in the *Rue de la Paix*, to explore the romantic beauties of Chamouni. Whether he “safely” returned to his *crib* is not exactly known; but it is feared that the internal and external works were so much

injured, as would prevent him appearing for some time in the *Palais Royal*.

- “ Give me the glace Tartoni makes,
 And take your Mer de Glace for me,
 I'd rather eat *his* ice and cakes
 Than cross again that frozen sea.
- “ Donkeys and mules conduct us there,
 Most proper guides for those who go ;
 If I get safely back, I swear,
 No more you'll catch me on its snow.”

About 5 P. M. we re-arrived at Sallenche, where we spent a pleasant evening with a transatlantic gentleman and his lady, who had amused themselves for some days previous in the environs, but, from their limited knowledge of the language, seemed to have fallen a prey to the gross imposition that had been systematically practised on them by the landlord and his myrmidons. I proffered my services, and the *commissaire de police* having been sent for, matters were arranged. We left the Bellevue the following morning, and stopped for breakfast at the Hôtel de Mont Blanc, at Pont St Martin, where we engaged a char-à-banc for Geneva. On entering the gates of the *Imperial* city, my passport was demanded. I demurred against this incessant annoyance, and held parley for some time with the sentinel, and at last refused to yield the document which had so recently

been in their possession. Moreover I wished to hear M. MALAN beyond the city gates on the morrow, and in strictness the sentinel had a right to demand it even then. We were also to leave early on Monday morning, and it seemed indecorous to violate the solemnity of the Sabbath, by dancing attendance at the passport office on that day, in order to its obtainment: besides, it was merely a few hours' return to a city, where only five days before we had domiciled. All this, however, availed nothing; the passport must be surrendered, and it was given with no good grace; of which I was duly reminded at the passport office, where I went at 11 o'clock P. M. the *same night* to demand it. My reproof in reply was tendered in terms as sharp as the language was in which the man in office chose to address me. On the following day, we attended service in the Cathedral of St Pierre, and I must admit the *toute ensemble* astonished me. The address, for it was certainly not a sermon, was altogether a mere tissue of sentimentalism, delivered with a theatrical tone and gesture; and making all due allowance for the youth of the speaker, it seemed an incoherent and dislocated rhapsody of fine words and fine phrases, "full of sound and fury, signifying nothing;" and last, not least, the *apostolic benediction* was wanting. In repeating the creed,

“ I believe in Jesus Christ,” &c., it was what the Socinian has said of the exclamation of Thomas, *subauditur*. The disproportion of the *sex* here was truly amazing, not one in twenty being males, and on our dismissal we noticed a “ Lazarus” at the gate. In the afternoon we attended M. MALAN, and were much pleased with his sermon, and the solemnity and decorum which every where reigned. The two front seats were entirely occupied by respectable English families: the chapel was extremely neat, and well attended. In returning, we noticed some observance as to the *letter* of the fourth commandment, “ the cattle within thy gates,” for during public service, at any rate, a barrier interdicts the transit of quadrupeds to and from the city. Our hôtel overlooked the “ Café de Bel Air,” and here *English servants* were amusing themselves during the day by playing at billiards !

CHAPTER II.

LAUSANNE AND ITS ENVIRONS—PARAGRÈLES—
CHILON.

ON the 27th June, we left Geneva for Lausanne, by the Guillaume Tell Steam-Packet, at 6 o'clock P. M. The fare of the first cabin is five francs. There was an English party on board, whose behaviour seemed to do no credit to their country, for they very much resembled school boys broken loose from their tutelage. We have heard of lads on the eve of the holidays amusing themselves by breaking their cups and bowls, but we did not expect to witness such conduct here. They did it, however, *pour s'amuser et passer le tems*, doubtless, but there were those on board who were not indifferent spectators of the boyish proceedings of these grown-up children. I marvelled at this sample of far-famed Britain. Far, far too frequently have we had occasion to blush for our countrymen, both in Italy and France, as well as in Switzerland; and

those reckless and thoughtless individuals little know the extent and amount of the mischief they do. If they have no regard for themselves or their proper credit and character, they ought to remember that there are relative duties which they owe, and by which they are bound; and while they may consider themselves at perfect liberty in the exercise of this *nonchalance*, they should be reminded that Britain expects that all her sons should do their duty. Every accommodation requisite may be had on board. The white wine was charged at five batzen per bottle, or about sevenpence halfpenny English, and was tolerably good, and the champagne on board the Winkelried (the other steam-packet), is quite celebrated in Geneva, improved perhaps by the navigation of the Lake. At 1 o'clock we reached Ouchy, the port of Lausanne, after a delightful sail on this beautiful lake. A small pier projecting into the lake forms a secure anchorage within its embrace, and a rough wall of stones serves as a breakwater. On the left is a beautiful specimen of the weeping willow, extending its main branches longitudinally for nearly thirty feet, being propped from below with stakes. From hence we ascended to Lausanne, which is elevated 450 feet above the level of the lake. The town is built on three hills, and their intervening valleys, so that many of the

streets are exceedingly steep, and walking becomes extremely toilsome. Lausanne, however, is very superior, we presume, to Geneva as a residence for the phthisical patient. Geneva is too damp, and though refreshed and renewed by the breezes of the lake, its atmosphere is one, as it appears to me, by no means suited for pulmonary affections. The alternations of cold, sometimes rapid, when the mountain breeze has previously to pervade the glacier, is a change too trying for the morbid frame.

On the revocation of the Edict of Nantz, many French refugees settled at Lausanne, bringing in their train industry, the means and medium of wealth. The population is about 9000. French is universally spoken, and almost all are protestants. The people seem lively and industrious; and it may be stated generally that the Vaudois are cheerful and intelligent. The newspapers published at Lausanne are the "*Feuille d'avis de Lausanne*," replete with advertisements, as well as the "*Feuilleton de la Gazette de Lausanne*;" and the "*Gazette de Lausanne*." Around the town are many fine promenades, particularly that which overlooks the Archery Ground, and some good limes are found in the avenue at this place—a favourite tree in many parts of Switzerland. This beautiful walk was our frequent resort. We were some

hundred feet elevated above the glassy mirror of Geneva's Lake, and all between was one extensive vineyard stretching far and wide. From hence we viewed the Alps beyond, rising in their magnificent range, and often witnessed, in a fine calm summer's evening, the setting sun, with all its crimson and vermillion glory, sink among their eternal snows, succeeded by an electric scene, which would be weakened by description, and requires to be beheld from a spot like this to be understood. The successive flashes of sheet lightning, and their brilliant corruscations illuminating the Alpine chain fretted with pines, or clothed with a mantle of snow, formed a magic picture full of beauty and sublimity.

Our sojourn at Lausanne exceeded a month, and we made frequent excursions in the country round, visiting the farms, cottages, dairies, vineyards, and orchards. We found the paragrêles very generally employed throughout this canton, and their value seems daily appreciated: the result, after numerous observations and repeated inquiries, justifies the confidence reposed in them. I have elsewhere advocated the question at considerable length, and conviction strengthens at every step. Professor CHAVANNES had the merit, amidst much futile opposition, of their introduction into the Canton de Vaud, and in a

lengthened conversation we had together, I decidedly gave my voice in their favour. There does not exist a solitary instance, I believe, on record, of a vine in their vicinity having become a victim to the hailstorm, while adjoining vineyards not protected, have fallen prostrate before the blast. The paragrêle simply consists of an upright pole, having attached to it a copper wire, little exceeding the diameter of a bell-wire, and confined in a groove lengthways by clasps. The wire is about twenty-five to thirty feet long, and the paragrêles are distant from each other sixty to 100 feet. The former is the safest distance, on the calculation that the lightning rod is efficient, or supposed so, only to an extent of double its radius. Each paragrêle is surrounded at the bottom with thorns or briars, to prevent the contact of cattle, &c. It should be observed that the wire enters the earth as deep as the pole to which it is attached, and extends one foot to fourteen inches above its summit. Such is this simple shield of safety, and the theoretic question connected with it involves that of the lightning rod. Both must stand or fall together. The meteorological phenomena of the atmosphere, are subordinated to, and modified by, its electricity, for this is the mighty and mysterious agent which moulds and controls them. Vapour and rain, snow and hail, are of

this description, and their formation and precipitation are effects of which electricity is the cause. The introduction of any agency, which can modify its quantity, must modify its power also, or any medium which can reverse its laws must annihilate its supremacy. When a fine capillary tube is supplied with water, and attached to the prime conductor of the electrical machine, the liquid may fall in alternate drops when the machine is at rest, but when put in motion a series of very finely divided streams impelled with force is perceived. When a metallic point is presented, that issue ceases, and resumes its previous appearance. Just so it is with the paragrêles, and their relation to the storm cloud. This is by no means the proper place to enter scientifically into the minutiae of the question; but it seems palpable to me, that *hailstones* are an instantaneous formation, connected with a much lower elevation in the atmosphere than we are apt to imagine. We have among the higher Alps met with abundance of *snow*, but never once met with any *hailstones*, and on lower planes, as among the Apennines for instance, while we have encountered drizzling rain, we have never once witnessed any thing in the form of a heavy shower. It may be doubted that the low elevation of the paragrêles can affect at so considerable an altitude the storm cloud, but it may

also be reasonably questioned whether the region of the storm be considerable. Over the Lakes of Cumberland the electric fluid may be seen to hover far beneath the plane of the observer, and to be attracted by the mountain's side, and discharge its fire; and MASSENA and SUWARROW were engaged in battle among the Alps, while the thunder rolled and the lightning flashed far beneath the battle scene. Nor is this by any means an unfrequent occurrence to the Alpine traveller. The electric gleam is seen to fret the masts of ships at sea, and flicker on the church spire on land. And even in a stormy night accompanied by rain, the metallic tips of the umbrella and the horses' mane are seen to glare with diluted and lambent flame. Canton's bells and the aerial electroscope concur to prove the agency of a pointed wire at no great height.

The general appearance of females in Switzerland is much more prepossessing than in France; they seem cleanly in person, and civil in manners. The ladies we saw in mourning wore crape veils, almost descending to the ground. The employments of poor women in Lausanne seem very masculine, such as the transport of heavy burdens, chopping up wood, leading horses to water, driving carts, &c. The public fountains are numerous, and one or two plumed by the graceful branches of the weeping willow.

The quantity of lettuce consumed must be immense. We have seen twelve persons engaged at the same time washing it at one fountain. The kinds chiefly used are the cabbage and tennis-ball; nor do I ever remember to have seen one of the cos variety.

During our stay in the city, new erections were going forward. One, on the left-hand, going through the gate, was in considerable classic taste, and intended for concerts and balls. The Maison de Force, at the other side of the town, was not finished; it has a fine appearance at a distance, and its situation is remarkably good. There are sixteen dungeons for convicts below ground, besides cellars for fuel and provisions; and 104 cells, or compartments, above. The higher story is destined for female prisoners. The court-room is central. We noticed, also, a large room for miscellaneous works, and particular ones for shoemakers and tailors. Classification of the prisoners is adopted, and they are required to work at their several trades. There were three fine conductors being erected. One was finished and seemed elegant, and constructed on proper scientific principles. The rod was of wrought iron, and tipped with gold. The medium thickness was about one-half inch; and, after passing through iron staples, it entered the earth through a box of well burnt charcoal, and

terminated in a well. These conducting rods came from Fribourg, in Germany. One hundred and twenty-eight steps conduct to the eminence where the cathedral stands, and from whence there is a fine view of the lake and adjoining country. The service on Sundays commences at 9 o'clock in the cathedral, as well as in the other two churches. At 12 o'clock there is catechism and examinations of the children; and at 2 o'clock the afternoon service. The order of the church service was as follows: First a short prayer; a psalm was then sung, and during this period the collection made, by a person with a tin case attached to a stick, and the contents at last poured into the general treasury, a very antiquated strong box, under the pulpit, which in the cathedral was of stone, the canopy richly carved, and bore the date 1633. A prayer follows the psalm, and all stand, until the text is read; and when the division of the sermon is announced, and the invocation of the Holy Spirit added, the hearers signify it by a bow, &c. In the afternoon the disproportion of males was striking, there not being present one for twenty females. We were informed, that sixteen years of age was the earliest period at which communicants were admitted in the churches. Before this the examinations are strict. For an entire year previous, they are constantly examined.

every Sunday; and during the last four months, at such periods as the minister may think proper during the week. We attended one of these instructive scenes in the cathedral. Questions in various forms were put by the clergyman indiscriminately to these young persons, and were very distinctly and interestingly answered. There were about eighty boys and thirty girls present. Prayers were said, psalms sung, and a neat and appropriate address given on the occasion. In the afternoon of the same day we witnessed the formula of baptism. The clergyman, after various questions, and answers returned, poured a little water into the palm of his hand, and having sprinkled the face of the child, repeating the usual form of words, the infant was presented, covered with a long white veil, which had previously been thrown back. The tower of the cathedral was struck by lightning on the 24th of May, a few weeks previous to our arrival, and considerable damage had been sustained, especially that part of the building immediately under the dome; and the wooden framework seemed to have been in one place set on fire. Several monuments, of no great worth, are seen here. That of the founder of the Hospice of the Great St Bernard is the most interesting. Among others may be mentioned, one of the crusaders, the first bishop of the cathe-

dral, and those of Harriet Canning, and the Princess of Orloff. The foundation of this gothic building was laid in the year 1000, and it appears to have been consecrated in 1275 by Pôpe GREGORY X.

We were once awoke, about midnight, by dulcet strains of music, quite a serenade à l'*Espagnol*. On enquiring the cause, we learned it to be a Swiss custom, when a newly married couple first occupied their own house, that their friends should assemble with musical instruments; and it is considered as a kind of welcome or token of approbation; for, if a marriage displeases them, the parties are not thus honoured. It is not unfrequent to take a journey for a short time, by those who can prudently afford it. The ring is not used in the marriage ceremony, but is generally given by the husband afterwards, amongst the higher classes, from a French custom, but is unknown among the poor. The general hours of the marriage ceremony are at 10 A. M. or 3 P. M., the clergyman being then in the church, on account of the morning and evening examinations: the bells ring during the ceremony, but do not continue.

The cemetery is at a distance of two miles from the city, on the Berne road; and funerals usually take place in the afternoon or evening. We witnessed, on one occasion, the funeral pro-

cession: the mourning coaches were painted black, and the horses were covered with black cloth: the hearse was surmounted with three tin ornaments in imitation of plumes, and the top with festoons of black cloth, and black and white fringe. Those who ranged on each side of the funeral-car had their heads uncovered, and the horses were led; a *bouquet des fleurs* was attached to the hearse, with a scroll of paper bearing MS. perhaps eulogy. Both the hearse and mourning-coaches were saluted by those that passed, who uncovered. On arriving at the cemetery, the mourners alighted (no females followed in the train); the hearse only was drawn into the church-yard; the coffin was extremely plain, covered with black cloth,—and on its being lowered into the grave, the *bouquet des fleurs* and scroll were thrown in, and the grave instantly filled up with earth, from a kind of barrow which was upset for the purpose.

The “cemetery,” though not a “Père la Chaise,” is neat. We observed a monument with the name of JOHN PHILIP KEMBLE the tragedian, who died at Lausanne on 26th February 1823, aged 66 years. His grave was very simple; from it we gathered a stem of lavender, which grew luxuriantly; there were also some other plants scattered over the grave.

There was on the left of the entrance-gate a chaste and elegant monument, erected over the ashes of "ANNA MARIA ALLOTT, nata WALLER," constructed in 1823; it cost 1200 Swiss livres, or about L. 750 Sterling,—the work of GIBSON of Rome, an English sculptor. The niche, if I mistake not, is a copy of the canopy of the tomb of Abelard and Heloise, now removed to Père la Chaise.

At Lausanne, the bread is entirely bought from the public baker. The table d'hôte is always at one o'clock, and consists of two courses and a dessert, each composed of five dishes. 1st, Two kinds of fish; two dishes of vegetables; something light, *à la sauce*. 2d, Roast and boiled meat, two kinds of vegetables, and something stewed or fried for the centre. Dessert various. We, however, generally dined in private. The fowls were always miserably bad, and not larger than pigeons; but the fish from the Lake of Geneva, with which we were plentifully supplied, was most excellent and diversified, as the carp, bream, tench, perch, &c. and especially the varieties of salmon and salmon-trout, called *Umble*, *Fera*, and *Ombre chevalier*. Perch were only three batzen per dozen, or about 4½d. The coffee-rooms are very good: and, beside excellent beer at 2½ batzen the bottle, may be had a most delightful and refreshing sum-

mer beverage, called *Lemonade gazeuse*, the price of which is 4 batzen per bottle. A good quantity of the coffee used is obtained from the chiccory-root, which is roasted in the usual way. The mustard is very dark, of the brown variety, and comes from L'Aigle. Both macaroni and vermicelli are manufactured here, and the latter is coloured with saffron, the price 4 batzen per lb. of 16 ounces.

The market days at Lausanne are Wednesday and Saturday, and the market is abundantly supplied with fruits and vegetables. Pears and cherries were most abundant, and the price reasonable: I received eighteen pears for one-half batzen, and noticed apricots, raspberries, gooseberries, &c.; the red currants were extraordinarily large; but I observed no white currants. Flowers of lime, chamomile, mallow, &c. were sold as teas. Among the most peculiar features in the vegetables displayed, were the stems of seedling lettuce, and central ribs of the white beet. The market was plentifully supplied with gourds: a large one was charged $1\frac{1}{2}$ batzen. On the 16th July I bought a bunch of red grapes, the first that had appeared in the market, cultivated in the open vineyard. The following were the prices of a few leading articles:

Wine.....	3 batzen *	℥ bottle.
Honey.....	9 ———	℥ lb
Butter.....	4 to 6 ———	℥ lb
Veal, Mutton & Beef...2	———	℥ lb
Cheese.....	4½ ———	℥ lb
Pork.....	3 to 4 ———	℥ lb
Bread.....	1 ———	℥ lb
Eggs.....	3 ———	℥ dozen.
Fowls.....	5 ———	each.
Duck.....	10	
Goose.....	15	
Turkey.....	20	

The chickens are puny and poor to the last degree. On a market day I noticed only one in a basket, and, when I repassed, it was dead. I was informed that the eggs were hatched by artificial heat in the oven.

At the top of the street where the market was held was a notice prohibiting horses, char-à-bancs, &c. from proceeding in that direction; and on each side of the street was a line of demarcation; the penalty, in case of offence, was five batzen. No grain can be sold in the corn market before the clock of the Hôtel de Ville announce the hour, and it must pass through the public stone measures. There are three, of different sizes, in the market hall, to which rollers are attached, and the aperture or outlet *without* is kept locked. They are fixed in the

* A batzen is equal to three-half-pence.

wall, the hollow stone-cisterns forming an integral part of it. Ample rules and regulations are painted on a board, which is raised, so that all may read it. When potatoes are not ripe, or in any way unfit for the market, or when any articles are found deficient in weight, they are confiscated to the hospital. As Lausanne, or its vicinity, may be selected by some English families as a temporary residence, the previously stated market prices may guide their calculations. It may be stated generally, that clothes are much the same as in England, perhaps a shade higher. In private lodgings, a furnished-room, &c. is twenty-four to thirty francs per month. Board and lodging may be computed at four to five louis d'or per month. Butcher-meat, bread, vegetables, and fruit, are reasonable, and good. Fish, from the lake, plentiful and diversified.

The town of Lausanne is well lighted, the lamps being suspended from the centre of the streets, and the light concentrated by parabolic reflectors. The oil used in the lamps is either that of the olive or rapeseed, purified by means of sulphuric acid and water. During our stay at Lausanne, there were issued two public notices from the *Conseil de Santé*, &c. of the Canton de Vaud; one respecting a disease then raging among the canine species, which it was feared

might pass into hydrophobia, and all dogs were ordered either to be tied up or muzzled,—an order, however, which seemed to be paid no attention to on the part of English, nor was any attempt apparently made to enforce it with respect to them. The other was concerning a *maladie epizootique*, prevalent among horses, and contagious. Gentle exercise was recommended, green provender, oats, &c.; and, above all, that they should be kept apart from strange horses. Lausanne affords, as has been already observed, many fine and diversified walks; and, from some of these, during moonlight, occasionally eclipsed by the transit of a dense cloud, or partially veiled by a thin film of vapour, the lake of Geneva presented many beautiful and varied aspects, and a perpetual change of silvery light and shade, rich in interest alike to the poet and the painter. There is a very romantic and singular walk beyond the castle gate; the foot-path winding among woods and under shrubs, or conducting to the bed of the river. Here we met with several young entomologists, with gauze-nets, collecting insects. There are seats, &c., and it seemed as though the Fête Champetre was occasionally celebrated there. In the woods we observed the *calceolaria*. The archery grounds are much frequented, and it appears to be a favourite amusement, resorted to every afternoon.

The enclosure is very neat ; the grounds and paraphernalia belong to a society. On the lower wall is a fine dial, on which are engraved the bearings of the principal mountains, and places seen from it.

We one day walked to Lutri, about four miles distant, and found ourselves immersed in all the bustle of a fair. There was but little novelty ; German tinder appeared the most plentiful article in it. The cattle were chiefly disposed of, at pretty good prices ; best milch cows fetched about L. 4, 10s., mules L. 18 to L. 20, horses L. 20 to L. 30. In the neighbourhood we observed some reverend elms, one of which measured twenty-five feet in circumference. On our return we were joined by a farmer, who conducted us to his farm and orchard, and offered us as many cherries as we either chose to eat or take with us. It does not appear that *arsenic* is ever employed in the preparation of the seed-wheat for sowing, to prevent the " blacks" (*les noirs*), as they call it,—*quicklime* being found quite effective, and certainly more rational, arsenic being pregnant with danger, though frequently used in some parts of England, especially in Norfolk. Poisons cannot be obtained there under any pretence whatever, except by express order from the municipal authorities, a most prudent and wise regulation.

We noticed the Poppy, Jerusalem artichoke, and Indian corn in cultivation ; turnip sowing had just commenced : a mixture of wheat and rye is often sown, the prudence of which we more than doubt. It is a plan occasionally adopted in the south of France, and the *ergôt* of rye, or spurred rye (*seigle ergoté*), when accidentally mixed with wheaten flower, carries off entire families : the bread seems sprinkled with *violet* spots. Even in England this disease attacks rye ; and it appears from specimens in my possession, from Worcestershire, to be a parasitic fungus of singular form. In all probability, quicklime would prove successful as a preventive. Here and there may be observed Indian corn and pulse grown between the rows of vines in vineyards, but this additional crop operates powerfully to its deterioration, as the slightest reflection would convince ; and, accordingly, we find that M. B. CHAPPUIS of Vevey has, in his *Traité sur la Culture de la Vigne* (Geneva 1824, p. 29.), given a decided opinion on its hurtful and destructive tendency, though he adopted it for several years from mistaken views, he has now abandoned it altogether, from a conviction of its deterioration of the produce of the vine. The rapidity of growth in Indian corn is remarkable : we have seen on the road to Ouchy a shoot of twelve to fourteen inches in a few days. Cat-

tle are fed on the leaves, tendrils, and twigs of the vine, and, when burnt, the ashes afford an alkali valuable for washing and bleaching.

The Winkelried Steam-Packet leaves Geneva at 8 o'clock A. M., and arrives daily at Ouchy about 1 o'clock, returning to Geneva soon after. On *Sunday* and *Thursday* it makes the *Tour du Lac*, leaving Geneva at 6 o'clock A. M., and after having circumnavigated the lake, returns at 8 o'clock P. M. When the weather is fine the decks are often crowded, this being a very interesting and favourite excursion, and costs only 9 francs. The "Guillaume Tell" leaves Ouchy at 7 o'clock A. M. daily, and Geneva at 2 o'clock P. M. on her return, so that the facilities of intercourse are well arranged and numerous. We repeatedly saw the packets come in; for, as may be imagined, our walks on the margin of the lake were frequent.

On the left of Ouchy, and only about a mile from Lausanne, a wolf was destroyed the winter preceding our visit, entitling the author of the achievement to the reward of 50 francs, the premium offered by the Cantonal Government. On the margin of the lake we observed a small species of light and compact sponge adhering to the pebbles, together with polypi, and a few young oaks in the Lake, self planted, the acorns having sprouted and grown in the water.

Pursuing our route in the direction of Geneva, on one occasion, close to the verge of the lake, we were much annoyed by locusts and lizards, but more especially by frogs, amidst the meadows and reedy swamps which fringed the lake. Dr CLARKE adverts to the musical serenade of the frogs in Holstein, and Prince MAXIMILIAN to the sound of a Brazilian species, as resembling that of the coppersmith hammering a copper vessel; but here this protean variation of sound, had at times a striking resemblance to the distant barking of a dog. At length we reached a Swiss dairy, and were delighted with its interior arrangements; cleanliness, neatness, and order prevailed throughout: here we perceived a large brass-pan suspended from a crane for heating the milk for making cheese: the churn was a flat drum-cylinder, suspended on an axis, and put in revolution by two handles or winches, one on each side, thus occupying two persons in the process of churning. While we remained, several persons brought in milk; the quantity was ascertained by a graduated dip-gauge, in a somewhat shallow vessel, and duly registered on two tallies with initials: one of these was given to the person who brought the milk, while the other was kept as a check-board. The milk thus received, was strained, by being passed through a vessel of a conical form, with a *bou-*

chon or stopper of clean wheaten straw, previously rinsed with water. Altogether the arrangements and management of a Swiss dairy might be safely adopted as an admirable model for a British farm.

In the gardens around Lausanne, we found the cardoon much more frequently cultivated than in England; also the scorzonera, in beds, sown in spring, and the roots are edible in winter. We observed also the *Tetragonia expansa*, or New Zealand spinach, as an article of culture, and it was much valued. Passionately attached to flowers, the interesting collection of carnations possessed by BARRAUD (Jardinier), Rue de l'Halle de St Laurent, did not escape me; the number of varieties was about 400: some of those in pots were truly superb. In this garden, the *Magnolia grandiflora* succeeds admirably. The pear-trees were well fruited, and were trained to stakes in a pyramidal form. Here the Chinese arbor-vitæ is often cultivated as a hedge, a purpose to which I never before saw it applied. The white mulberries were large and luxuriant: this naturally led to inquiries why the cultivation of the silk-worm was neglected in the Canton, and BARRAUD assigned the occasional rains as the reason, which sometimes continue for four or five days without intermission, the mulberry leaves, thus wet, be-

ing improper food for them ; but as it would not be difficult to desiccate the leaves completely, the objection vanishes. The cultivation of the *Phormium tenax* has nowhere, at least so far as my inquiries have extended, been attempted, nor even that of the *Dipsacus fullonum* or teasel. The standard or tree rose is justly esteemed a favourite here, as everywhere else ; some of them were very tall ; we observed the jasmine embracing their stems in some gardens. The pretty policy of M. PERDONNET, a Parisian banker, in the environs of Lausanne, merits particular notice. This delightful spot is called *Mon Repos*, though “ This is *not* your rest,” might be inscribed on its gate-way : it is a complete thing of the kind ; gardens, groves, grottoes, aviaries, temples, fountains, statues, and Chinese bridges, are beautifully disposed ; there is of course a *froggery*, à la François, plentifully tenanted. The collection of plants was very inferior, both in the conservatory and elsewhere :—I observed, however, a date-palm in fruit. The mansion was under extensive repair.

A coarse sandstone is employed in building, and the blocks are separated in a quarry adjoining the higher parts of the town, by the pick and wedge, raised by means of a vast wheel and crane : the wheel is broad, and revolves by steps in its interior, worked by two men,

somewhat as in a reversed *treadmill*, and we were much amused with its operations.

On Tuesday, the 6th July, we left Lausanne, at 7 o'clock A. M. via *Calèche*, and arrived in about two hours at Vevey. The entire road, elevated about fifty feet above the level of the lake, lay through vineyards flanking the inclined planes of the hills. It was the market-day, and all was liveliness and bustle: many had arrived with their merchandise in boats from a considerable distance on the lake. We observed a variety of fruits; peaches, plums, gooseberries and currants, a small kind of pear not larger than Spanish nuts, and plenty of cherries, and amongst them good specimens of the *bigarreau*. The cheese was three and a-half batzen, and Indian corn flour one and a-half batzen per pound. Paragrêles were observed in all the vineyards from Lausanne to Vevey, which is a pretty town, at the extremity of the valley traversed by the Vevayse, a small river, having its source at the foot of Molesson, and falling into the lake of Geneva near the town, which is ancient, and mentioned under the name of Vibiscum in the Itinerary of ANTONINUS. It suffered much from fire in 1687. Its staple trade and manufactures are tanning, watchmaking, clocks, vin de pays, Gruyere cheese, &c. The principal church is St

Martin's. There is a grand fountain, decorated in Egyptian taste; and weeping willows, as at Ouchy and Lausanne, may be seen to overtop several of the others. I observed a *liminimètre* on the edge of the lake, to register its rise and fall. The promenade on the borders affords a fine view. LUDLOW, one of the judges of CHARLES I., fled to Vevey, on the accession of CHARLES II., and also BROUGHTON, who read the sentence of death. There is a calcareous spring at Montreux, through which we passed, which might be turned to good account in the obtainment of casts of coins, and medallions, as at the baths of San Filippo, near Acquapendente.

At Vevey we engaged a char-à-banc, for thirty batzen, to go to the Castle of Chilon, so famous in Swiss story. It is an ancient fortress, built by one of the Dukes of Savoy, in 1238, and founded on an insulated rock, detached long ago from a mountain that frowns over it, and lies deeply imbedded in the lake, which is stated here to be 800 feet. It is situated between Clarens and Villeneuve, and opposite are the Alps above Bouveret and St Gingoulph, and the bold heights of Mellicre. Within the castle is a range of dungeons, excavated far below the level of the lake, where the early reformers, and, subsequently, state prisoners, were confined.

“ A double dungeon, wall and wave
 Have made ;—and like a living grave,
 Below the surface of the lake,
 The dark vault lies.”

In the main dungeon are seen seven insolated pillars, and an eighth, in relief, in its rocky wall. Rings still remain in three of these, to which the prisoners were attached ; and, in the pavement, the footsteps of some poor captive, perhaps BONNIVARD, may be traced. Across one of the vaults near this, is a beam, dyed deep with age, on which our conductress informed us the condemned were formerly executed.

When the Bernese conquered the Canton de Vaud, the Castle of Chilon and that of Yverdun were the only fortresses that held out ; and an old handmill is still shewn that was used during the siege in 1536, when the Bernese made war on CHARLES EMANUEL, Duke of Savoy. It afterwards served as the residence of the bailiff of Vevey, till the year 1733, and is now used as a gunpowder magazine. By experiments made in the lake near this spot, Messrs MALLET and PICTET proved, that, while the surface-water of the lake was 66° Fahr., at 312 feet deep the thermometer sunk to 51° Fahr., a decrease of temperature amounting to 15° Fahr.

Near this fortress, ROUSSEAU has fixed the catastrophe of his Heloise. At some distance,

Chilon, with its whited walls, as it were at anchor in the lake, has a very picturesque appearance. Between the embouchure, or mouth of the Rhone, and Villeneuve, at a little distance from the latter, is a very curious islet, crowned with three poplars and a small building.

———“ A little isle—

A small green isle—it seemed no more.
Scarce broader than my dungeon floor;
And in it there were three tall trees,
And o'er it blew the mountain breeze.”

The castle receives its chief interest from the magic poetry of Lord BYRON, and the misfortunes of BONNIVARD, the captive inmate of its dungeons for six years. We were conducted over a drawbridge to its gate, where a sentinel introduced us within its precincts, and consigned us to the guidance of a female, who had charge of the keys of the dungeon: its pillars and its walls presented a very gloomy aspect, saddened by its historic associations. Numerous initials, interspersed with doggrel rhyme, were scratched here and there—memorials of visitors anxious to leave some memento, or to be immortalized even in the dungeons of the fortress of Chilon.

FRANÇOIS was the son of LOUIS BONNIVARD, Lord of Lume, born in 1496. At the age of sixteen years, his uncle bequeathed to him the rich

priory of St Victor, the buildings of which abutted on the walls of Geneva. Embracing warmly the cause of this infant republic against the encroachments of the Duke of SAVOY, he incurred his bitter resentment. In 1519, when the Duke entered Geneva, BONNIVARD fled, intending to go to Fribourg, then in alliance with Geneva, but was seized on the road by the emissaries of the Duke, and carried off to the Castle of Grolée, where he was imprisoned for two years. On his liberation, he returned to the Priory of St Victor, and, in 1528, sustained a skirmish against those who had possession of his ecclesiastical revenues, the city having supplied him with arms and ammunition. In return for this act of his protectors, he sold them his birthright, and the Genevese applied the revenues of the Priory of St Victor to the support of the city hospital. This transaction was made under a promise from them of the first vacancy in the chapter of the Cathedral of St Peter; and in consequence of this expectancy, BONNIVARD seems to have lent himself to the ignoble office of secret services in the cause of the republic. In 1530, when crossing the Jorat, on some such espionage, he was attacked by brigands, between Moudon and Lausanne, and after a stout resistance became their captive. He was then delivered up to his mortal enemy the Duke of SAVOY, who had him conveyed to

his Castle of Chilon, where he remained for six years, the latter four being passed in the dungeon already mentioned,—sad abode for wretched guilt, but still more dismal for such a man as BONNIVARD, struggling for freedom, and the emancipation of his country from thralldom. Whether BONNIVARD was ever *chained* to one of the pillars of his prison-house does not seem certain, though asserted as a fact; any such appendage would certainly be superfluous, except so far as being a *sub-juga* remembrancer of his vassalage to his iron master. In such a safety-den as the heart of a solid rock, chains and fetters might well be spared, and its trap-doors and its strong bolts seemed additional security, enough even for a lion's den. When the Bernese, under the command of NÆGELIN, took Chilon, on the 29th March 1536, BONNIVARD and three Genevese deputies were restored to liberty. Our hero returned to Geneva, where the rights of a citizen of the republic were conferred upon him, and the grant of a house, together with an annual pension of 200 crowns. The republic, however, refused to pay his debts, and BONNIVARD, after quarrelling with the Genevese, went to Berne, where he reclaimed the priory of St Victor, his patrimony, which they had, however, demolished in 1534, for the safety of the city. After a tedious litigation, the business was arranged in

February 1538, on immediate payment of 800 crowns, and the promise of an annual pension of 140 crowns during life. We find BONNIVARD imprisoned in 1545, in consequence of refusing due homage to a magistrate. He married a relation of CORNE, one of the Syndics, but this did not contribute to his domestic peace and happiness. In 1551, he presented all his books to the republic of Geneva: some of them are very rare, and form the basis of the public library of the city. He composed a History of Geneva, and other works, which, however, the republic never seems to have considered itself bound to print or publish, and the manuscripts remain *in statu quo*, in the archives of the library. He died in 1571, at the age of seventy-five years*. On the whole, though the biographer of BONNIVARD can scarcely deny him the merit of patriotism, still honesty and candour must admit that he was a restless and turbulent man. He might have been happy could he have been contented with his patrimony, ample even to magnificence; but he seemed born for the storm or the whirlwind, and most at his ease amid the tumult and clamour of the populace, of which he aspired to be the oracle and the idol. Many of his misfortunes appear to have been of

* See *Inter alia*, "Le Conservateur Suisse de Lausanne, 1825," tome xi. p. 436. *et sequent.*

his own creation, and while the heart bleeds for his sufferings, it must believe him in some measure the victim of a *felo de se*.

The Canton de Vaud includes the greater part of the lake of Geneva. Off the rocks at Mellerie opposite Chilon, the depth is 949 feet. In summer, the lake rises five or six feet above its average winter level, occasioned, it is said, from the increase of the waters of the Rhone, from the melting of the glaciers. It is difficult to believe, however, that this extraordinary accession in depth over a surface of 202,020 feet in length, by 45,000 feet in breadth, or, say twenty-six square leagues of surface, is the entire offspring of such a cause,—periodic electricity will be found, in all probability, the chief and effective agent in this extraordinary convulsion,—a conclusion rendered more probable from the consideration, that sometimes the waters of the lake experience a curious oscillation, — rising three or four feet above their usual level, and being as suddenly and as far depressed; and this singular alternation is often continued for hours together. In August 1816, the phenomenon was particularly remarkable. It is well known, that, during the great earthquake at Lisbon, the waters of St Winnifred's Well ceased to flow, and many of the fountains and lakes of Britain were violently troubled and convulsed.

The late Dr MUTER, one of the ministers of the Church of Scotland, informed me, that, on that eventful morning, he was walking arm in arm with a friend on the edge of Lochlomond. The lake was tranquil, not a breeze ruffled its calm and settled surface, and all around was still,—suddenly, however, the waters rose fully eight feet above their level, without any previous indication, and as suddenly fell back into their common channel, and had nearly swept them into its vortex. The lake is also subject to occasional storms and tempests—sometimes sudden, and at other times long continued,—and the *stormy petrel* is occasionally killed on its surface. Far from freezing in winter, it is often seen to *smoke*, the waters, from their depth, sustaining a higher temperature than the superincumbent atmosphere. It is absurd to suppose, as some have done, that the Rhone traverses the lake without mingling its waters with those it passes through. To support such an assumption would require that the impetus of the waters of the Rhone, at their entrance, should be more than equivalent to the resistance of those of the lake, through an extent of thirty-eight leagues in longitude.

The lynx sometimes appears among the Alpine regions of the Canton de Vaud, and makes considerable havoc among the flocks. In the higher Alps, the alpine or white hare is hunt-

ed, and the white mole is found among the vineyards and the fields of Lausanne. The beaver is now unknown, though a pair were killed about twenty years ago, at the lower end of the valley of Etivaz, near the sources of the river, which meanders through it. The marmot, living in societies, is found in the green patches at the foot of the Glaciers of Diablerets. The wild boar ranges in the forests at the foot of the Jura, and the Chamois antelope is found in the lofty ranges around Vevey. The bouquetin (*Capra ibex*) is now extinct, and the lämmergyer is extremely rare. The golden eagle hovers over the mountains of the Jura: a *white* variety of the cuckoo (*Cuculus canorus*) has been seen near Morges, and the eider duck has been killed not far from Vevey. Near to Montreux the green lizard is seen to attain the length of one foot, and in the forest of Chilon the common snake has been found ten feet long. At Baume, where immense numbers of vipers are found, there is a *vipèrerie* for the accumulation of them, destined for *medical service*, and also as a restorative for the invalid. The *Mantis religiosa*, or as the French call it *Le Prie-Dieu*, occasionally presents itself in the attitude of supplication. In the Canton de Vaud the white mulberry has been planted for rearing silk worms, but no attempt of the kind has been supported

with any spirit, save only that at Cassonay by an individual of the name of GAULIS. The success, however, which has for many years crowned his enterprise, is a practical evidence that such would certainly succeed in other hands under proper management *.

At Montreux the rosemary fringes the edge of the torrent, and such is the range of the herbarium of this Canton, that a few hours walk transports you from the vine, the peach tree and the almond, to the *Salix herbacea*, that miniature of trees, and the *Gentiana nivalis*: such are the wonderful extremes in Alpine countries. The roots of Gentian being submitted to distillation, are much used in medicine, and immense quantities are sent into Germany and other parts, from the Canton de Vaud. Here the fig-tree often sheds her figs twice a-year, and the peach and almond mingle in the vineyards with the vines. Sugar is manufactured from the maple in the valley of Etivaz, with profitable returns. Potatoes, hemp, flax, &c. are a good deal cultivated.

* See my "Observations on the Cultivation of the Silk-Worm." 8vo. 1826. G. B. Whittaker, London.

CHAPTER III.

SECOND VISIT TO CHAMOUNI—FALL OF CHEDE—
PASSAGE BY THE COL DE BALME TO THE VAL-
LAIS.

HAVING returned to Geneva, we took the diligence for Sallenche the following morning, and paid for the inside places 8 francs each; the fares are regulated by the post-office. On our way to Bonneville, we observed that the hemp had been plucked up, and after having been steeped, was spread out in the fields to dry. The scythe is here used to substitute the sickle in reaping the corn. Hops are cultivated, but not to any extent, and the vines seem miserably managed. There were from twenty to thirty crosses, emblems of catholicism, planted on an eminence to the left, about twenty-five feet high, and being plated with tinned iron, gleamed in the sun-beam. In this valley many a mountain is defaced: the debris which has fallen down, has

formed inclined planes usurped by vegetation, and is a kind of geological chronometer or talus, a circumstance which DE LUC has not overlooked. The houses at Bonneville, and all the challets we passed on the route, were wooden structures, but not so neat or clean in appearance as we had seen them in other districts.

One of our *compagnons de voyage*, was M. T. of Coligny; and the conversation naturally enough turned on the then recent Edict of the Court of Turin, which positively forbids instruction, whether in reading or writing, under a heavy penalty, unless the candidate fortunately possesses property to the amount of 1500 francs. He farther informed me, as a fact with which he was personally acquainted, that a medical gentleman at Chambery had received fifty volumes from Paris connected with his profession, and they were seized by the police and actually consumed in the public market place, by a kind of "*auto da fe*." No newspapers, periodicals, or books of any kind are suffered to enter this portion of the precincts of the king of Sardinia's dominions, and the poor creatures are forbidden to read any but what are printed at Chambery, which are under the surveillance and censorship of miserable monks. The Bible stands pre-eminent in their vehement persecution, and the Waldenses are eternal monuments of their malignant

enmity and bitter hate ; such is the unsophisticated spirit of popery.

“ Monstrum horrendum ingens, cui lumen ademptu m.”

These are thy glorious triumphs and trophies, Oh superstition !—and thy fruits in the nineteenth century, matured in a country whose Prince assumes the title “ MOST CHRISTIAN.” Finding that our companion was a protestant minister, the theology and theological controversies at Geneva became the topic of discussion. While he eulogized the present professor of theology in that city, M. CHENEVIE'RE, he admitted that too much warmth and unchristian temper were displayed by him ; and certainly any candid mind, on perusing his “ Précis des Débats Théologiques” (Geneva 1824), must admit that he stands fully committed. In that document, he endeavours to ridicule what many eminent divines consider the cardinal doctrines of Christianity ; and though not openly, yet by implication, leaves us to infer, that *his* sentiments, at least, and those he promulgates from the chair, are of an Arian or Socinian tendency. Indeed, afterwards, he seems afraid of having gone too far, and, in a postscript, endeavours to give a softened gloss to some of his terms, somewhat apologetic. Our companion admitted M. MALAN was uncourteously treated, and when pres-

sed on the question of that foundation rock of Christianity, the Divinity of our SAVIOUR, he repelled the idea of the infidel notion of SOCINUS as at all prevalent among the ministers of Geneva, —the bone of contention he termed merely “une question des mots.”

The rocks in this romantic and beautiful valley have their sides richly esconced and clothed with the larch and cembra pine, pluming here and there in linear perspective stair-like buttresses among the Alps. In several places we observed gourds reared in the open fields; along the valley, and on the left is a tolerably fine cascade,—its waters fall from a considerable elevation, and on their way to the river, supply a mill,—a very frequent occurrence in alpine pictures. Near this spot is the “lieu d’echo,” where a person waits to discharge a small cannon. The reverberation is uncommonly fine, and repeated five times. Here may be observed terrible debris. Rocks being launched from their eagle towers, and dashed into the valley, and being broken in their terrible fall, form torrents of angular stones which the waterfall scatters over the plain. The varied disposition of light and shade, and their incessant change at every angle, would charm the painter, by its living draperies and diversified effects. Here we frequently perceived clumps of the *gean* or wild cherry, the

crab and wild plum, sad emblems of the uncultivated waste of mind in the subjects of the King of Sardinia, who, under happier auspices, might rise in the scale of intellect, and quit themselves like men;—but what, alas! can be expected under the dominion of monks, those “beggarly elements of men?” Alluvion deposited from the overflowing Arve, renders the soil in the lower meadow-ground fruitful; but the water rising to a similar level with that in the bed of the river, imparts a swampy character to some localities. The road from Bonneville to the Pont St Martin is particularly picturesque and romantic, and gives no cause for the eye to tire or wander unsatisfied around. Here and there in the rocky walls are observed natural niches that might enshrine an image, and streamlets of water issuing through rents or orifices in the adjoining rocks, that give a singular character to the scene.

We rested for the night at the Hotel de Mont Blanc: the evening was cloudless, and the moon rose in all her loveliness over the snows of Mont Blanc—PATRIARCH ROCK OF EUROPE. We walked to the centre of the bridge thrown over the Arve, that we might have a more distinct view of the sublime and beautiful spectacle. At breakfast on the following day, we were not a little amused with a dandy, who somehow had got far out of his road, and wandered, not knowing whither

he went. The cockney possessed all the inane folly of that listless tribe. *Ennui* had taken possession of his entire man, if indeed the term be not a misnomer. He bewailed his miserable lot—he seemed to have lost the log-book of his reckoning, and to be in a perfect maze. He thought he had certainly lost ten years of his (*valuable*) life by such an adventure, and, doubtless, could he have procured Fortunatus's wishing cap, he would immediately have transported himself to Bond Street. He saw nothing in "Mount Blank," and wondered what *others* could see there to make such a fuss about. "Were Mount Blank," was his sagacious remark, "in the neighbourhood of London, t'would be *macadamized* in less than a fortnight."

We left the inn to pursue our route to Chamonni. On the left, we revisited the fall of Chede, and while we contemplated the fine cascade before us, a beautiful rainbow, "child of vapour and the sun," threw its glowing arch over the chasm into which the waters were precipitated. Opposite to Chede, beyond the Arve, are situated the Baths of St Gervais: in the year 1751, the environs were overwhelmed by the fall of a mountain. While on this spot, we encountered a young Frenchman, a pedestrian, who was occupied in taking a sketch of the scene. The descending spray was considerably refracted

diagonally, by the attraction of the mountain, and formed a very good illustration of the deflection of the plumb-line, as verified by Dr MASKELYNE and the BARON DE ZACH. Keeping the eye for a short time fixed on the fall toward its centre, and then transferring it to the mountain on either side, the rock seemed, by a curious optical illusion, to ascend. We perceived a little flax cultivated somewhat higher than the plane on which we then stood. While several friends with whom we associated retraced their steps to the road, we, by the assistance of a guide, threaded our way along the bed of a rivulet through a wood, which, we were told, was infested by snakes, represented to us as occasionally found of an enormous size. We, however, saw nothing of the reptile species, except a harmless *Julus sabulosus* writhing among the sand, and received no annoyance, unless, indeed, the barking of a shepherd's dog might be so considered: the animal seemed sensible that we were intruders on these devious paths and woodland retirements. On the left, bubbling from the road side by the rock, we passed the only outlet of the *Lac de Breven*, stationed on the higher mountains above; and, on the right, the water which issued from a spring I found highly impregnated with calcareous matter, so as to encrust the moss and twigs, &c. over which it trickled. From this

road we glanced off to the precipitous heights which overlooked the valley of the Arve, in order to get another view of Mont Blanc and the fall of the river. Far beneath us lay the rude romantic *Pont des Chevres*, thrown across the river, and over this the French artist passed, with his easel slung across his shoulder, and accompanied by his guide. Our eye followed them winding among the narrow and deep defiles of insulated mountains, detached from the main group of the Alpine chain, and fretted with their plumage of pines, till they were lost behind the impenetrable screen which rose before us.

On the main road our delighted ear was charmed with a fine musical echo, produced from the blowing of a horn, composed of pieces of common wood, roughly put together, with five iron hoops: this musical instrument was from three to four feet long, the mouth-piece about four inches circumference, and the opening at the further extremity eight to ten inches. This rude horn was employed by one of the shepherds of the Alps to collect together his wandering flock, and summon them from the mountains. The sound, at first loud and full, vibrated from rock to rock, until its tones were so softened as to be heard only as a distant murmur, that gradually died away upon the astonished but de-

lighted ear, though, in its last sigh, the tone and note were perfect and distinct.

Our by-path was miserably cut up, and in sad ruin and disorder, from the incessant breaches made upon it by the mountain torrent. Besides the rush of many waters, there was no sound heard but the chirrup of the grasshopper. The trees which here skirt the lower flanks of the Alps, are the hazel, alder, common and weeping birch, and the larch, *indigenous* only to primitive rocks; but these were overtopped by the *Pinus cembra*, wedded to these Andes of the Old Continent. We revisited the small collection of objects of Natural History connected with various districts of Switzerland, at Servoz, and then withdrew to the inn, where we had a most luxurious alpine repast, consisting of excellent *Gruyere* and *Schabzieger* cheese, the former remarkable for its honey-comb or cellular structure, and the latter receiving its mottled appearance from the expressed flower, or bruised seeds, of the *Melilotus officinalis*, and somewhat resembling sage cheese: the bread, too, was remarkably good; superadd to these, though last not least, abundance of fine Alpine strawberries and cream of the richest kind, and as good *champaigne* as we ever tasted, only charged one and a-half franc the bottle. We rose from table well satisfied and pleased. Our hostess was

good natured, and seemed anxious to do her best, the whole being seasoned with a little *attic salt*. Thus quite contented, we set off for Chamouni, and encountered, at the hamlet opposite the Glacier de Boissons, our old captain, CHARLET, who was returning from the fields with his scythe. I immediately engaged him as our chef-guide, to pass the Col de Balme on Friday morning, having arranged to remain the following day at the *Prieure*, or village of Chamouni, to afford time for our interesting companions who had joined us at Geneva to visit the Mer de Glace. There are two very excellent hôtels at Chamouni. The Hôtel de l'Union, where we stopped, and the Hôtel de Londres: at the latter may be seen a very fine specimen of the Great St Bernard dogs, which are very rare; and in all my excursions, this, and one I saw at the village of the Simplon, in 1818, were the only ones I ever saw beyond the Hospice. At half past 5 o'clock we sat down at the Table d'Hôte; forty-three were English, to which number our party contributed five. Our host certainly did not seem to be wanting either in the quantity or variety of the dishes: among the chief peculiarities before us were the flesh of the chamois stewed, and peas of the "crooked sugar" kind in their 'pods. The variety consisted of five dishes, five times repeated, along the extent of table in diamond

form, these again were five times renewed, forming so many distinct courses, including the desert. The nut-crackers, made chiefly of box-wood, were on the principle of the *thumb-screw*, once an instrument of torture. The *vin ordinaire* was of a superior kind, and the *champaign* excellent.

The chief crops reared in the valley are oats, flax, and potatoes. On glancing over the album, it would appear that Chamouni was but rarely visited anterior to the year 1815. We were much delighted with the return of the cattle in the evening from their mountain pastures; each had a bell, and the "tinklings," sufficiently sonorous, ministered their part to the magic scenes of Alpine rural life, with which we were surrounded. The sounds were peaceful and even melodious, and possessed all the charms of association. While our friends on the following morning scaled the Montanvert, I wandered about the village, and paid a visit to the church. Here I perceived one kneeling in the attitude of devotion, telling his beads, and was quite amused with his graceful salutation as I passed him; so truly mechanical is this system of bead numeration, and arithmetical display of credos and ave marias. In this extraordinary mechanism of the religion of Catholic devotees, multiplying wheels would be a convenient adjunct,

and these might be moved by clock-work ; surely the inventor at any rate would be freed from purgatorial punishment. The little collections of natural history in the village were duly examined ; but the only purchases I made were a specimen of fused *amphibole*, and a fine cut fragment of rock-crystal, set in a gold ring, both said to be from the top of Mont Blanc.

Early in the day we went to the Source d'Averon, and collected a few plants by the wayside. At the challets of the *Village de Bois* we discovered some indications of goitre. The inhabitants seem to rest secure, notwithstanding the probable advance of the glacier, which, in all likelihood, will soon usurp the place where the village now stands. In one of the challets we had a draught of excellent milk ; order and cleanliness seem to reign in the departments of the *cuisine* and dairy. The bed of the Arve was scantily supplied with water, though in winter the river overflows its banks, so that the water from the mountain torrents in winter much exceeds that of the melting of the snows and ice of the glaciers in summer. We crossed over temporary bridges of planks and flag-stones ; and at length, by clambering over large boulders scattered in the bed of the river, found ourselves on a rock close to the tremendous mountain of ice from which the Arve takes its rise. The

vault, however, had fallen in some time before, and had annihilated the temple of the icy god. Under one of the enormous masses of ice which had separated from the main glacier, the air was at one P. M. 27th July, 54° Fahr., and the water as it issued was 40°. The aquamarine tints in recent rents were extremely beautiful. Among the plants collected at this spot were the *Tamarix germanica*, *Epilobium rosmarinifolium*, *Empetrum nigrum*, *Trifolium saxatile*; and while in contact with the ice, I plucked branches of the *Rhododendron ferrugineum* in full flower, also *Erica vulgaris*, the white variety in bloom, together with *Vaccinium* *Vitis Idæa*, loaded with its ripe cranberries. On a block of ice here, I first tried my experiments in reference to the hint received from the stones which I observed had sunk deep into the Mer de Glace, under the influence of the sun-beam. A piece of granite was placed on the surface of the mass of ice referred to, and over it I poured water and sulphuric acid alternately. By the intense heat thus immediately produced, the stone sunk with uncommon rapidity; a curious fact which might have been turned to admirable account in the destruction of the Glacier of Getroz, which devastated so very extensively the Valley de Bagnes and the Town of Martigny in 1818. A few gallons of sulphuric acid judiciously directed on the glacier,

would soon have opened an avenue and channel for the escape of the waters, long ere the profound lake could have been formed, which finally burst its barrier with a power which nothing but the "everlasting mountains" could withstand. The temperature of the water on the *Mer de Glace* this day was 34°. Lime-water exposed to the air soon became clouded by a superficial film of carbonate of lime. On our return to the village the air was 65°, and the water of the Arve indicated 37°, a decrease of 3° of temperature, compared with that at the *Source d'Averon*, contrary to what we might reasonably have expected.

On Friday morning, we and our friends left Chamouni at half-past 5 o'clock, A. M. to cross the Col de Balme with five mules, and a char-à-banc, to *Argentiere*, about two leagues distant. Our guides were CHARLET "dit le Doyen," and BALMAT, "dit le Mont Blanc;" we also had with us a lad to take back the char-à-banc to Chamouni; it cost eight francs, and each mule six francs, each way; the period of *return* being always charged. We winded on our mules up a steep ascent; on the left the river was struggling and toiling among many boulders in the bed of the torrent, and the waters were dingy from the dissolved ice and snow. At the gate of *Agentiere*, the *passports* for our mules were de-

manded with the accustomed form, The Glaciers of Argentiére on our right stood out in sublime relief in the Alpine picture, with all their pinnacles and spires.

The Col de Balme certainly presents a rich feast to the botanist. The *Rosier des Alpes* (*Rhododendron ferrugineum*) lay scattered in profusion; and we were fortunate to obtain a specimen of the *white* variety. The following may be mentioned as among its flora, and of frequent occurrence. *Salix reticulata*, *Salix herbacea*, *Rosa alpina*, *Eriophorum alpinum*, *Vaccinium uliginosum*, *Primula farinosa*, *Gentiana verna*, *Gentiana bavarica*, *Gentiana campestris*, *Ornithogalum luteum*, *Androsace lactea*, *Androsace carnea*, *Saxifraga androsacea*, *Teucrium montanum*, *Carex atrata*, *Aster alpinus*, &c. On great elevations, two peculiarities characterize the vegetation. The comparatively prevalent livery of the flower is *blue*, and the colour is more intense than in the plain. From my own personal observations, in several countries, and under many peculiarities of circumstance and situation, I feel persuaded that the indigenous distribution of colour in the blossoms of vegetation will be found to be bounded by peculiar geographical limits, whether in latitude or altitude. Thus, in arctic and antartic regions, the *prevalent* colour will be *white*; on the verge of, and in the temperate

zones, in both hemispheres, *blue* and *yellow* ; and, in the torrid zone, *red*. Thus, on the higher range of the mountains which fringe the Missouri, *blue* is the colour which most frequently shews itself; as the *Penstemon erianthera*, and *Aquilegium cœruleum*, and matted and procumbent stems, are common features. Dwarf or almost stemless flowers are frequent on mountains; and, by some recent experiments, these variations of habit are to be ascribed to the diminished atmospheric pressure in lofty regions.

The view from the summit of the Col de Balme is truly magnificent, and comprises the Valley of Chamouni, its challets, its forests, and its mountains, where Mont Blanc, far above the rest,

“ With meteor banner to the winds unfurled,
Looks from his throne of clouds o’er half the world;”

and the Col des Geans, with myriads of domes of snow, rocky aiguilles, and fields of ice, the Buet, and the *Tête Noir*, which is the usual route from the valley of Chamouni to the Vallais; but it is destitute of the superb prospect and magnificent range of vision we enjoyed, which, though purchased with considerable fatigue, was well worthy of all, and we felt ourselves amply repaid. From this point are also visible the great glaciers of *Argentiere* and *Tour* : and all

around, the rocks and mountains were sprinkled with challets, flocks and herds. Here are perceived several of the great passages over the Alps; Mont Cenis and the St Gothard; and before us lay the Vallais, with the river Rhone and the Great Road, which, like an arrow in repose, points to the Simplon, and to Italy, "where even the very weeds are beautiful"—to the "Eternal City," and the Garden of the World.

—— "Il bel paese
Ch' Apennin parte, e l'mar circonda, e l'Alpe."

On this summit is a decayed cross, and a stone of demarcation between Savoy and the Vallais. Near here were fragments of the bones of some animals, which had fallen victims to the *lämmergeyer*, or the wolf, the lynx, or the bear.

The personal history of the venerable BALMAT "dit le Mont Blanc," one of our guides, as detailed by CHARLET, may not be deemed an uninteresting episode. Our hero had been FIFTEEN TIMES on the summit of Mont Blanc, all but three of which he ascended *alone*, and is in all human probability the first individual who ever attempted it, many years before SAUSSURE. He is now between seventy and eighty years of age, and has been prepossessed from childhood with the idea, that amongst the mountains he should find a treasure, and even yet he is un-

willing to relinquish the search. BALMAT is a man of peculiar habits, and very reserved disposition. He seldom informed any one, not even his wife, that he was intending to leave the valley, but would take a basket of provisions, a lantern, a great cloak, or more properly an old blanket, and his climbing pole, and, thus singularly equipped, would set off for several days, and not return until, like the famished and prowling wolf, he was forced down by hunger. He used generally to find bits of rock-crystal, and other mineral fragments, which he would sell for a few francs; and, as long as this money lasted, it was in vain to urge him to do any thing. He would sit ruminating over the fire, or walk about the door in a thoughtful mood, till, like the sloth, again compelled by want, he would sally forth in quest of new adventures. His age and infirmities, however, now press upon him; he is not able to endure much fatigue, and must resign to others these mountain treasures—the *el dorado* of his mind. Ever unsettled, he refused to join the guides; but they compassionately now allow him to take his turn in any short excursion not involving much fatigue, and permit him also to receive benefit from their club fund.

On our descent from the summit of the Col de Balme, we stopped for a short time at a shep-

herd's challet. I observed here, among the motley mountain furniture, an almanack, in reference to saints' days, and the Conquests of CHARLEMAGNE, which formed the library; also a tally-stick, with notches, for ascertaining the quantity of milk. We had some cream at this resting place, and a peculiar soft cheese, somewhat of the consistency of cream-cheese, made for their own use. The bread was very indifferent. Our subsequent descent was at times extremely rapid, almost headlong, and, by a devious path, through a forest of pines, and over a rude log-bridge thrown across the mountain torrent. We at length gained a challet, with a room recently constructed for strangers. From the summit of the Col de Balme to this place we were pedestrians, as BALMAT, who had been a little in advance of us, drove the mules hurriedly down the precipitous ascent, and had arrived here long before us. The wine was scarcely entitled to the name of *tolerable vinegar*, being the most wretched specimen of the *vin du pays* we had ever tasted.

We made the rest of the journey to Martigny on mules, ascending and descending by turns, and winding round many a mountain, and over many a chasm. I observed walnut and chesnut-trees; in the green plains were numerous withered and blighted trunks, that had been shattered by the

hail-storm or the tempest, or blasted by the lightning, or perhaps debarked by the debacle rushing from the mountain. Here and there were numerous and enormous rocks hurled from their alpine repose to sleep in the plain ; while others were shivered into fractions in their fall. At half-past five o'clock P. M. we arrived, tired enough, at the Hôtel de la Tour, at Martigny.

CHAPTER IV.

MARTIGNY—THE CATASTROPHE OF 1818—THE
GREAT ST BERNARD, AND HOSPICE.

MARTIGNY is a town of no importance, except so far as it may be said to be the connecting link between four of the principal roads in Switzerland; for here meet the roads from the Val-lais, the Great St Bernard, the Canton de Vaud, and Geneva. It likewise makes a convenient halting place for travellers, and for the commerce and traffic of two of the main passes of the Alps into Italy; the Great St Bernard and the Simplon. The town is more memorable for its misfortunes than any thing else it can boast of. On the left, coming from the Col de Balme, is seen a rock, crowned with the ruins of the old Castle of Batia, formerly the key, or the outlet of the Rhone from the valley, which is flanked here by the Dent de Morcle and Dent du Midi.

In 1595, Martigny, with 140 persons, was destroyed by a debacle of the Dranse; and, in

the *archives* of the St Bernard, is a manuscript, on vellum, which records that this unfortunate town was desolated on 7th August 1469, and all the bridges carried away, from the source of the river to the bridge of St Maurice, by a deluge of waters from Mont Joux and the lofty summits of Mont Durand: and that similar catastrophes have occurred, at various epochs, long before, is evident; for, on opening ditches in the plain, five or six distinct beds may be counted, quite apart from each other, formed by successive alluvia; and at a depth of fifteen feet, rubbish has been found buried under rounded sand.

Near to Mont Pleureur, toward the bottom of the valley, is Mont Getroz. A narrow and deep channel separates these two mountains, and in this defile rests the Glacier of Getroz, forming part of the chain of glaciers extending from the Great St Bernard to the Simplon, and separating Switzerland from Italy. The superior branch of the river Dranse springs from the Glaciers of Val Soret, St Bernard, and Val Ferret; and the lower branch takes its rise from the Lake of Champriond, near the Glacier of Chermontanne. This river flows through the rugged Valley de Bagnes, anastomosing with the Rhone at some short distance from Martigny. In May 1818, an avalanche from the glacier of Getroz fell

from its station into the bed of the Dranse, and intercepted the current of the river. At length, from the accumulation of the water beyond, a lake was formed 10,000 feet long, 400 feet broad, and 200 feet in depth; the entire contents of the lake being 800 millions of cubic feet. From 10th May to 13th June, fifty persons were employed, under the engineer VENETZ, in excavating a tunnel under the avalanche, which had the effect of reducing the mass of water from 800 millions to 530 millions cubic feet in three days. However, on Tuesday 16th June, at half-past four o'clock P. M. the pressure of the water forced the tremendous barrier of ice; the torrent arrived at Bagnes, a distance of six leagues, at ten minutes past five—at Martigny, four leagues, at six—at St Maurice, three leagues, at six minutes past seven—and at the estuary of the Rhone, lake of Geneva, five leagues, at eleven o'clock; having travelled fifty-four miles in six hours and a-half. Thus was one of the finest valleys of the Alps (Valley de Bagnes) suddenly converted into a waste for an extent of six leagues. At Martigny, four-fifths of the harvest were utterly lost. Here the torrent parted into three columns; the central one rolled its ruinous tide through the town; the one to the left passed by the foot of the Batia; and the one to the right swept the foot of the mountains opposite the side.

of the valley. The dikes of masonry, for an extent of 10,000 toises, were overturned ; half of the orchards destroyed, some large trees were torn up by the roots, while others were decorticated. The number of bodies found and buried was thirty-four. About eighty houses in the town and suburbs of Martigny were carried away : the stables and out-houses of the inn called the " Cygne" were obliterated : altogether the number of houses destroyed were 359. The loss was irreparable, but the estimate exceeded one million and a-half francs.

I arrived at Martigny, on my way to Italy, on the morning of the 21st, only five days after this terrible catastrophe, and should have been there on that disastrous night, but for my providential detention at Geneva, on account of my passport, which M. HENTCH, to whom I had an introduction, had forwarded for me to Berne, for the signature of the Austrian Ambassador, it being necessary for my entrance into the Lombardo-Venetian kingdom. I walked from Geneva to Martigny, having forwarded my luggage to Milan : all the roads were destroyed, and I had to *wade for half-a-mile*, where the Rhone had inundated the road, from having overflowed its banks. At Martigny, I found all the fountains destroyed, and the approach to the fragment of the town that remained was marked

by the most pitiable scene of desolation; what had once been fields were sand-banks, sparkling with particles of mica, and clothed with myriads of grasshoppers; I observed some trees decorticated to the height of ten feet, so that the water must have rushed through Martigny at that depth. At the corner of a ruin, I encountered a miserable *cretin*, who, the image of mental wreck, shook his head, the only ensign of life. One side of the inn where I rested had been carried away, and I took my breakfast exposed, and as it were *sub die*. The following descriptive and emphatic appeals, I observed posted up at the inn.

“ Ames sensibles, images de la Divinité bien-faisante, jetez un regard prospice sur cette plaine devastée par les eaux du Lac de Getroz, se precipitant, comme un colosse, depuis le sommet de la Vallée de Bagnes, jusqu’ aux rives du Rhone, et roulant avec ses flots la mort et la destruction la plus effroyable, le 16. Juin à 6 heures du soir.

“ Contemplare malum et misere succurrere viator.”

16. Junii, anno MDCCCXVIII.

“ Ex Glacie Getroz noviter lacus erupit ingens
Saxa, domos, pontesque rotans in plana Veragri,
Fœurit pauper, viduaque parentibus orbe
Flent; Irus luget, qui modo Crœsus erat.”

A vivid recollection of the scene of destruction still fills my mind, and often occupies my thoughts. How apposite here is the emphatic language of Scripture, and, oh ! how literally true :

“ Behold ! he withholdeth the waters and they dry up ; also he sendeth them out, and they overturn the earth *.”

On Saturday morning we left Martigny, about seven A. M., for our ascent of the great St Bernard. We had a char-à-banc as far as Liddes, though certainly it might have gone, as we afterwards found, to Bourg St Pierre, without much difficulty : the rest of the day's journey was performed on mules ; one was despatched before us to the Hospice with provender for the rest, which were four in number. There were a good many fine chesnut and walnut trees in the plains. On the opposite side in the valley the crops were cut down, and the hay collected : on the lower parts of the mountain the harvest scarcely appeared ripe, and still higher the corn was quite green ; all was sown at the same time, so that it afforded a striking example of the diversity of clime with regard to elevation. Numerous challets appeared, amid verdant and smiling pastures, skreened by woods from the

* JOB xii. 15.

mountain breeze: and in the meadows we perceived autumnal crocus scattered in rich profusion. We dined at Liddes, where our party was joined by several others of our countrymen, and arrived at Bourg St Pierre at half-past three P. M.; and, after traversing a devious path, destroyed by the waters of the torrent, we came to a kind of charnel-house on the right—a Golgotha, or receptacle for the dead. Farther on is a place of occasional rest for the *marroniers*, and the dogs of the mountain, when in search of wanderers. Provisions, we were told, are occasionally left here, where haply they may be found. We passed on our route about 100 milch-cows, belonging to the convent, and had but a short way to traverse an inclined plane of frozen snow, or ice, before we arrived at an angular rock, the spot chosen by the celebrated painter DAVID for his picture of NAPOLEON BONAPARTE crossing the Great St Bernard. A short distance more brought us to the Hospice, where we arrived at half-past six o'clock, when the thermometer stood at 62° Fahr.

The Great St Bernard is situated on the confines of the Vallais and Piedmont, in that part of the mountain-chain called the Pennine Alps. The scene for several miles before we scaled the Hospice was forlorn and ruinous: here Zoology seems to have withdrawn herself for ever;

and even the hardy and rigid cryptogamia of Botany scarcely dare to stalk abroad. The shattered fragments of rock, or their mineralogical elements of quartz, felspar and mica, seem to lord it over all, and the only feature in them is the mechanical attraction of the debacle, which wages incessant war with geometrical angles and straight lines, by its propensity to mould them into curvilinear forms. We leave the valley, where "the fig tree blossoms and the fruit is in the vine," to visit a Siberian region, overshadowed by the glacier and ravaged by torrents and snow-storms; and an almost tropical sun, to brave the rigour of the climate of Greenland or Spitzbergen.

Terrible, in many places, are the profound chasms and caverns which the Dranse has made, where its impetuosity and power have received an accelerated *momentum* from the fall of an avalanche into its bed; the stream being temporarily suspended, only to burst forth with centuple fury. Here rocks are scooped out from their deep foundation dormitories, and forced to rise into day by the resistless power of the waters, and thus reveal their form and dimensions. Subsequent torrents chisel out the bed of the river, and the *vis a tergo* launches them into the valley, where their Leviathan bulks repose, the wonder of the philosopher: the endeavour to ac-

count for which has raked up so many geological speculations. The high and lofty monument of Truth is not to be reared by the speculations of cabinet or closet philosophers, but by facts which are gleaned from the phenomena displayed in the universe. This, I think, will be found to be the true source of *many* of the boulders, though the opinion is the very reverse of that usually adopted. While *they* bring them from higher elevations, *I* dig them up. Truth compels me to regard the opinions of VON BUCH, DE LUC, and others, as egregious trifling, rather than to abandon convictions which have been forced upon me by the palpable evidence of my senses: nor can I ever forget the examination of the bed of the Dranse after the memorable inundation of June 1818, and the vast boulders that then appeared to be rooted up, and pushed along the channel of the river, and finally landed in the plain. The repose of boulders on the Saleve, &c. is, in all probability, an antediluvian phenomenon, and many a valley that had no prior existence must have been grooved out by the circumfusion of the diluvial waters and their submarine currents; and to be convinced that such possess a mighty power, we need only remind our readers of those vast rocks called "travellers," which the sea rakes

up in storms, and transports to the verge of the Bell Rock. Doubtless many valleys have, since that time, been formed by the incessant action of rivers and torrents having their momentum resistless, from the fall of an avalanche. I well know I disturb the blissful reveries of the geologist, and he will cry out "there is treason in the camp;" but the force of truth requires this statement.

Mont Velan, the residence of snows, is the most elevated of the group of mountains forming the Great St Bernard, and is 10,391 feet above the level of the sea. The two glaciers, which hang as it were on the neck of this mountain, are those of *Glerets* and *Vassoré*; part of the supply of the Dranse comes from the former, while the torrent of Vassoré springs from the glacier which bears its title. In this wonderful solitude, surrounded by continual snows and never melting glaciers, stands the Hospice, the abode of the Angel of Providence, having as it were the keys of life, and stationed at the base of the "mountain of death" (*Mont-Mort*, at the foot of the *Barasson*, behind the Hospice), with a commission of safety, shelter and rescue; where even the inferior creation lend their willing services in the cause of philanthropy. It is *here* that we forget for a time the difference between Protestant and Catholic—merging into one tide and

confluence of active benevolence. It is *here* that the hated name of *heretic* is unknown, for it finds no place in the *Missale romanum* of the Great St Bernard; and the Protestant for a time rejoices even in the midst of Catholicism, because the *power* of godliness has subordinated the *form*, and cast it happily into shade. "To do good and to communicate," is the motto which blazons the escutcheon that crests the mountain of St Bernard; and these worthy Augustines seem to have kindled the fire of their benevolence at that heavenly light, which once shone over the plains of Bethlehem, and proclaimed "GOOD WILL TO MEN."

The Hospice or Monastery known under the name of Mont-Joux, is commonly called Great St Bernard. BERNARD, uncle of CHARLEMAGNE, in May 755, marched upwards of 30,000 men into Italy by this route,—hence Mont-Joux acquired the name. In 1792, some Swiss and Sardinian battalions retreated by this passage from Savoy to Aosta, and the famous march of NAPOLEON BONAPARTE, from 15th to 29th May 1800, has given the mountain a new celebrity. Whether the Carthaginian General HANNIBAL passed by this route or the *Little* St Bernard, is a disputed point, the solution of which seems a question of very inconsiderable moment.

The Hospice, constructed of stone, is a very

solid structure, situated 7,542 feet above the sea's level, the loftiest inhabited spot in the old world, and is surrounded by a circumvallation of naked rocks, glaciers, and mountains of snow. Its grand and chief object is to receive, lodge, and relieve, gratuitously, all who pass the mountain, and who require such succour, without any distinction whatever of nation, sex, condition, or religion. It is served by a chapter of canons regular, of the order of St Augustine, having at their head a mitred and crosiered prior, who is chosen by themselves, as they possess freedom of election, and though confirmed by the Pope, and recognised by the Canton, the whole is independent of the Bishop of the Vallais. The chapter is composed of thirty members, eight of whom remain at the Hospice on the St Bernard, two at that of the Simplon, two are engaged in making annual collections through Switzerland, and the others are employed in supplying the eight benefices of the Vallais, which belong to the convent, after having worn out the vigour of manhood and prime of life in the active services of the Hospice. This convent was once rich, and possessed, in various countries, above eighty benefices; it was plundered, however, of all the possessions it reckoned in the dominions of the King of Sardinia in 1752, and is now reduced to some scattered domains in the

Vallais and the Canton de Vaud,—means too limited for the extensive demands on its benevolence.

On tempestuous and stormy days the *marro-niers*, or assistant domestics, and the interesting dogs, traverse the mountains in search of the benighted or tempest lost wanderer, and to discover those who have missed their way among the snows, or are buried beneath them : and are often accompanied by two of the Augustine monks. 8000 to 9000 annually pass this mountain, all of whom stop for refreshment at the Hospice, and generally remain for the night; they make up sixty beds, independent of those for the poor. On a stormy night in 1762, 560 individuals collected, requiring the immediate supply of four oxen, twenty sheep, and eight quintals of bread. In 1818, it was computed that the number of meals given amounted to 31,078, and the annual expenditure of the Hospice may be reckoned, on an average, at 50,000 francs, or L. 2083 : 6 : 8. A hundred milch cows belong to the Hospice, and feed in the mountains below. The produce of the dairy is converted into cheese and butter, and what is not required for their own consumption is sold. All their provisions and fuel must be brought by mules, from a distance of from four to six leagues, and they are obliged to keep up a store sufficient for three

years, as they have several times been for this period cut off from all connection with the plain, from the severity of the weather in these elevated regions; even in August the thermometer is often below freezing, and ten clear days may be presumed the greatest number any year ever presents.

Not far from the lake, near the Hospice, which is little more than a mile in circuit, once stood a temple dedicated to Pennine Jove, now called the *Plan de Jupiter*. The adjunct Pennine, which also applies to this portion of the Alpine chain, is derived from the Celtic word *Penn*, a point or summit. Medallions, &c. are found near the spot.

The evening being fine, I employed myself in clambering among the rocks, examining the lake, and walking in the direction of Italy. Among the rocks, near the Hospice, I found the *Centaurea montana*, blue-bell, and the scarlet variety of the *Leontodon taraxacum*, the *Myosotis*, and fine specimens of *Sedum*. The temperature of water descending from the mountain was 48°, and that of the lake was 53°. On its surface I perceived a small brown beetle floating, and in the water toward the edge a *gordius*, and some caddis worms moving about in their cylindrical sheath (*Libellula varia?*). On a mass of ice on the mountains, I repeated my

experiments with sulphuric acid and water, and the ice was perforated with great rapidity. In the receptacle for the dead bodies found in the snow, several were dried up like mummies,—the last deposited seemed to be in a state of horrible decomposition, and lay extended on bones and other bodies in this sad charnel-house. On going to the *Maison des Morts*, we perceived a skull lying on the ground much blanched, and a body that had been committed to the earth (one on whom some ensign of catholicism had been found) was considerably exposed, there being no depth of soil,—it had been well secured from the bear and the wolf, by wooden pegs. On the top of the Barasson, which overlooks the Hospice, we perceived a cross. The *Pierre poli* is now very difficult to obtain, but the superior of the convent had the kindness to present me with a very fine specimen: its reflection and smooth polish are very great, entirely of a different character from that called in Derbyshire *Slackenstein*, and seems to have been produced by a shift and considerable *glissement*, in an already indurated state. I detached a fine fragment of gneiss immediately behind the Hospice, and on which it is founded, in it the mica predominated. During our visit, workmen were engaged in raising the

main building an additional story, and the greater part was unroofed.

The person who had the charge of the Meteorological Journal, shewed me the instruments: the observations are taken and registered daily at *daybreak*, and at *two o'clock* P. M., but they intended that this arrangement should be altered to *daybreak* and *mid-day*, to correspond with the periods of observation in the "*Observatoire Royale*" at Paris. By the Journal, it appeared, that at two o'clock P. M., on the day we visited the Hospice (30th July 1825), the barometer indicated a pressure of 21.08 inches. The thermometer within the walls was 11° R., (or 57° F.), and SAUSSURE'S hair hygrometer stood at 85° . On the 5th and 18th of this month, the registered temperature was 12.5 R. (or 58° F.) I found that the lowest fall of the barometer ever observed was 20 inches, and the minimum of the thermometer 20° F. below zero. The preceding winter had been excessively severe, and the thermometer had fallen 18° F. below zero, or 50° *below the freezing-point*. At eight o'clock P. M., by my observations, the barometer stood at 21.08 inches. SAUSSURE'S hygrometer was 86° ; interior thermometer was $13^{\circ} 5$ R. (57° F.), and that on the wall without 9° R., (or 53° F.), being the warmest day they had experienced during the season.

The lake, it has been mentioned, was completely thawed,—a phenomenon that had not been remembered for many years.

At half past 8 o'clock P. M., we sat down to dinner, in all twenty five, eighteen of whom were English: Mrs M. was the only female, the remainder were three Frenchmen, two Bernese, and two monks, one of whom was our excellent and intelligent superior, who did the honours of the table. Our dinner, though a "day of grace," was copious and good; notwithstanding the absence of *animal* food—a term, however, which must except *fish*, with which we were duly supplied. *Soup-meagre*, fried potatoes, stewed apples, pastry, &c. were followed by excellent cheese and prunes, and fine peaches, the first ripe ones we had seen. The red wine was good, and the whole repast closed with a round of famous muscadell.

In the room was a pianoforte, and in one of the bed-rooms I observed a violin. No. 9. was that allotted to us, and was the best in the Hospice, secured through the courtesy of one of the party, we joined at Liddes, and who had arrived on the mountain before us. Some of the party could not speak so highly of their night's repose; one having been almost drowned in bed by the rain, which had fallen through the ceiling from the roofless state of the building, and all his clothes were soaked so completely, that in the morning he

could not put them on. The only ornaments on the walls of our room were two prints of HERACLITUS and DEMOCRITUS; we felt it intensely cold, though it had double windows, for the temperature at Martigny was 72° , and the thermometer during the night fell to 49° , being a difference of 23° . We had indeed a fire, and were plentifully supplied with billets of wood, but the extreme rarity of the air occasioned a sad defecation of *caloric*, and our candles burnt so dimly from the same cause, as to afford us a light little exceeding that of a taper. At half-past 9 P. M., when we retired, my thermometer without was 51° , and I found that boiling water exhibited a temperature of only 186° , though SAUSSURE states that water boiled on Mont Blanc at 187° Fahr. This accounts for the impracticability of boiling food at the Hospice under common circumstances. The only remedy would be the substitution of PAPIN's digester, in which an increased pressure is obtained. During the night turmeric paper exposed to the wet was tinged red: Lime water and nitrate of silver produced no immediate effect on the rain water; we were annoyed with slight fever, and excessive thirst.

The following morning at day-break, we were aroused by the swell of the organ:—it was the anniversary of the dedication of the temple,—and

we soon adjourned to the chapel, which we entered by the organ gallery. It was indeed a solemnity, and a thousand thoughts rushed upon the mind. The Sabbath morning, the loftiness of the scene, the highest habitable spot in Europe, and here too was the celebration of christian worship, though disfigured by Catholic rites and ceremonies, where once stood a heathen temple, and all the interesting circumstances connected with the achievements of good that had been accomplished on this mountain, called by the mountaineers *Mont Devi*, (Mons Dei), the Mountain of God. The organ warbled such strains as I had never heard before ; they seemed the very notes of Heaven : the monks chaunted the service most delightfully : these, and the prostration of the pilgrims beneath us, I do confess, carried me away by overpowering feeling ; and here I think is the quicksand on which the young noviciate is shipwrecked. The venerable prior had arrived the day before from Martigny, though labouring under considerable indisposition, and remained quite retired during his stay : he was, however, present there, and is a good looking and venerable old man. In this pretty chapel is a fine marble monument, erected to the memory of General DESSAIX, who fell at the battle of Marengo : we went to look at it, and to deposit our contributions, which though never

requested, are certainly due by those who visit the Hospice from motives of curiosity, or for pleasure. During the preceding evening and night, about 100 pilgrims had arrived at the convent from Italy and the Vallais ; and a lady from the Vallais had come that morning, having travelled all night, to tell her beads : her stay did not exceed an hour.

At the conclusion of the solemnity, I wrapped myself up in my cloak, and sallied out in a very contemplative mood, to walk on the road toward the Italian side. The mountain was shrouded in a dense cloud, which shifted and flitted before me, now enveloping the Hospice, and then, wound up like a scroll, again discovering the interesting scene. On my return I was met by one of the dogs who wagged his tail, and fawned upon me, and, with a welcome bark, was my *avant courier* to the convent. Doubtless the bark was to announce the arrival of another pilgrim. These interesting creatures are quite peculiar, of a large size, and fawn colour, with white spots ; one, however, was entirely white : they seldom bark, and never bite strangers. There now remain two old dogs and one female ; the latter is a very fine and healthy animal : one of the former was ill : there were, besides, three puppies of about eighteen months old, very lively and good natured : the young were eager .

to fondle with us, but the others were more reserved. Our superior informed us, that they had the misfortune to lose three of these invaluable animals in 1816, by the fall of an avalanche. At night they sally forth among the snows of the mountains, and the dog, which may be called chef-guide, carries a blanket buckled round his body, with a small supply of provisions, and a phial of brandy attached to the neck: thus equipped he presents himself to the perishing wanderer, and suffers himself to be unloaded for his benefit, and then, as his pioneer, conducts him to the Hospice, where all his wants are speedily relieved. Should an individual be found to have sunk from exhaustion, the dogs return to the convent, and apprise the inmates of the circumstance by their bark, who then join the dogs with a litter, &c. and are immediately led by them to the spot where the unfortunate wanderer lies.

It was computed that the dog *Barry* had been thus the means of saving forty persons from destruction. The most remarkable part of his eventful story, was that of bringing an infant to the convent on his back, whom he had found among the snow, and who was subsequently an inmate in the Orphan Asylum at Geneva. It is conjectured that the parent had either fallen over some precipice, or been buried in the snow,

and in all probability, the infant, from the intense cold, must have been found in a state of suspended animation, the dog having restored him, by licking the face with his warm tongue. This can be but conjecture, but in all probability it must have been the case. Barry has been dead some years, and is stuffed and preserved in the Museum of Berne, with the identical phial attached to his neck in which he carried the brandy.

Over the door of entrance in our *Salle à manger*, I noticed a portrait of a former Prime Minister of the King of Sardinia, who had in the olden time been a benefactor to the Hospice; and a history of the Gospels in Latin, very curiously and closely written in the form of a cross, and neatly framed. Our courteous and kind superior shewed us his little cabinet of antiques and minerals; the latter contained rock-crystal, asbestos, pierre poli, &c. and a specimen of *ceramian sinter*, said to be from the summit of *Mont Blanc*; this, however, I consider a mistake. These extraordinary sand tubes have doubtless been the produce of lightning, and I possess several fine specimens, presented by the late Mr IRTON of Irton Hall, on whose estate in Cumberland they were found; mine bear a complete resemblance to this specimen. In the former, we observed coins and medallions of silver

and bronze, found on St Bernard; ornamental slips of gold; the head of a spear; a Hercules, and a foot, very fine. We likewise admired some fine drapery all in bronze, but the most singular article was a hand of bronze, covered with a serpent, lizard, frog, &c., in all probability the types and emblems of disease, a votive offering, after recovery, to the Pennine Jupiter, the counter part of which is found in almost every Catholic chapel, especially in Italy. The words *EX VOTO* bear us out in this opinion.

At 10 o'clock, high mass was to be celebrated, but before this hour we took our leave, of perhaps the most interesting spot on the surface of the Globe, the inconvenience we experienced from the effects of intense cold prevented our prudently remaining longer: the weather had changed, and shortly after we left the Hospice we were completely wet through; but this change was only in the mountains, for when we arrived in the plain, we were melted with heat, almost suffocated with dust, and stung with mosquitoes. At Liddes we quitted our mules for the *char-à-banc*, and had not proceeded far when the vehicle broke down at the edge of a precipice, and we had a very narrow escape from being precipitated to the bottom. It was, however, bound together with strong ropes, and we proceeded on our way to Martigny.

CHAPTER V.

BRIEG—THE VALLAIS—PASSAGE OF THE SIMPLON
INTO ITALY—THE LAGO MAGGIORE AND ITS
ISLES—ARONA.

ON the following day we left Martigny about 11 o'clock, having made arrangements with a Vetturino to conduct us into Italy. Near the town there is some marshy ground which has been the cause of frequent intermittents. On the surface of the water, on each side of the road, the white water lily displayed its lotus flower. We arrived at Sion at 3 o'clock: the ruin of the Chateau de Tourbillon overtops an adjoining hill, built in 1492, and once the residence of the diocesan of the Vallais, but it fell a victim to fire on 24th May 1788, which also consumed in a few hours 126 houses. Around are cultivated vineyards, figs, mulberries, and almonds; saffron is also raised. This town is the capital of the Vallais, and residence of the bishop. Here we dined and stayed the remainder of the day;

the grapes and peaches were very fine, and the wines both red and white were good. We saw several goitures and cretins. The *cranium* of the cretin is still I believe a desideratum with the phrenologist, and is, I fear, likely to remain so, at least from this quarter, as we were informed, no pecuniary inducement whatever could prevail with the sexton, or any other individual to give it up: for these unfortunate beings are beheld by the people with a superstitious veneration, and even their bones are almost considered sacred; in their utterly helpless condition, it seems a very providential circumstance that they are regarded in such a light, as it secures their being taken every possible care of. Sion experienced many smart shocks of an earthquake on 28th January 1803.

Early on the following morning, we left Sion for Brieg, which is situated 2184 feet above the Mediterranean, and arrived there at 6 o'clock in the evening: the climate is very hot. Both the vine and saffron crocus are cultivated. The roofs of the houses are slated with a silvery schistus, and much ornamented with globes of tin, which impart a very singular aspect to the town. In this district, from the year 1465 to 1469, a contagious disease, of which the memorials are still preserved, carried off 2400 persons. It has been frequently agitated by earthquakes, parti-

cularly in the years 829, 858, 1024, 1117, 1356, 1394, 1531, 1577, 1621, 1633, 1682, 1754; and in the year of the great earthquake at Lisbon, Brieg was agitated by shocks almost daily, from 1st November 1755 to 27th February following. The intervals are 29, 66, 93, 68, 186, 38, 137, 46, 44, 12, 49, 72, &c., which yields us no data in reference to the theory of the phenomena of earthquakes, as far as the periods of return are concerned.

There is here a convent of Jesuits founded in 1662. The chief altar of this church is formed of *Lapis Ollaris*, brought from a neighbouring quarry. This stone is often used for cooking vessels and stoves, and seems admirably adapted to this purpose, as it withstands very intense heat. We visited the convent, and were conducted over the premises by one of the *fathers*. In the superior's room we perceived a New Testament, *DOUAY edition*, and a few trifling books not worthy of notice, such as a German dictionary, &c. We also observed a quantity of tobacco, which is apportioned out to the friars: one of the departments is devoted to smoking, and here I suppose they concoct their Jesuitical and mischievous designs: the bedrooms we saw were tolerably decent. Attached to the wall were a barometer and thermometer: there was a room devoted to compounding sim-

ples, and there were boluses, pills, and plasters, ready prepared. We were subsequently taken over the college annexed to the building, and were told that the branches taught were Latin, Greek, German, Logic, Rhetoric, Philosophy, Arithmetic, Geography, and Astronomy. There were then eighty-five élèves, sixteen of whom were attending the rhetoric class. Having seen the *Salle à manger*, where dinner is introduced at 11 o'clock, we visited the garden, which, though supplied with roots and fruits, was utterly devoid of shrubs or flowers. In the evening we went, during vespers, to the chapel of a convent of Ursuline nuns, founded in 1663; the number of nuns was from twenty to thirty, seemingly wrapped up in all the extasies and abstractions of devotion. Many were extremely young, and some of them beautiful, and in tears! The vespers were chaunted with exquisite solemnity and tone: it was not difficult to see that the grand endeavour was to give the thing *effect*, and I must own that the entrance and exit of the monks by the side doors, clothed in vestments of white, and bearing torches, with their crucifix, and Agnus Dei at their girdle, followed by train-bearers with bells, and censers smoking with incense, and all the pomp and ceremonial of the *corps dramatique*, their signs of the cross and genuflections, were altogether more the creation

of romance, and the picture of some centuries ago, than any thing we should have expected to witness in the present age. Here, however, was palpable evidence, that the very *form* as well as the spirit is, as has been asserted of it, “unchanged and unchangeable.” This is the witchery that fascinates the young female heart, an advantage which the Lady Abbess knows full well to manage; and the sacrifice is perhaps made with less reluctance, as *monks* can grant absolution of sins, past, present, and to come.

In the Vallais there is a mixture of cultivation and neglect. It is the seat of earthquakes; and subject to tempests and storms, to the fall of the mountain, and the avalanche, and to the destructive effects of the debacle and glacier;—here is a melange of the beautiful and of the frightful, the savage and the sublime. The rocky walls which flank the Vallais separate it from Italy on the one side, and from the Canton of Berne on the other; and the surrounding mountains are crowned with terrible glaciers, which form impassable barriers to the traveller. The river Rhone takes its rise from the glacier of Fourche, 5418 feet above the level of the sea, a source unknown to the ancients, who considered that it issued from the gates of eternal night. After winding through the Vallais, the Rhone loses itself in the Leman Lake.

Where the picture of the simple and patriarchal lives of the inhabitants of the Vallais, as given us by ROUSSEAU, is to be found, we cannot tell. There may be more than meets the eye, but we doubt whether research would ever conduct to so notable a discovery. To all appearance the people are listless and lazy, much attached to rags and wretchedness, their wedded love; agriculture is almost neglected, and industry is among them without either a local habitation or a name. The Canton is rigidly Catholic, which is the only public worship permitted. The Bishop of Sion is hereditary member of the diet, and his suffrage is equal to four votes.

The bear and wolf are killed almost every year at the Baths of Loèche, which they frequently visit; and also in the Valley de Bagnes: the bouquetin is very rare; the alpine, or white hare, marmot, chamois, musk rat, and white mouse, are all occasionally found. The *Merops apiaster* is seen watching the bees in the vicinity of Sion, and other places where bees are reared. The ortolan is shot near Sierre. The river Rhone abounds in perch, carp, tench, and salmon trout. Near to the embouchure of the Rhone, the fresh water tortoise is found, and in some of the rivulets flowing into this river cray fish are numerous. The green lizard is met with among the dry rubbish of old ruins

two feet long, and the black salamander inhabits damp rocks. Leeches and the *gordius* in swamps and meadows become dangerous to cattle. Many bees are reared in the Vallais; the honey is used as a substitute for sugar, and the wax is in great demand for the numerous tapers that burn before the altars of their saints and madonnas. The "*Great Apollo*," king of Alpine butterflies, soars from the plain to the glaciers.

The following is the geographical distribution of vegetation in reference to Alpine altitude, and is here particularly observable. The *Pinus cembra* grows 6300 feet above the level of the sea. The *Rhododendron ferrugineum* and *hirsutum* 7000 feet, *Azalea procumbens* 7500 feet, *Salix herbacea* 8500 feet, and the *Aira subspicata* 9400 feet. While the stag shumach (*Rhus cotinus*) is found near the bed of the Rhone, a little higher will be discovered the *Arbutus Uva-Ursi*: and the summit of this amphitheatre is crowned with the *Pinus Larix* and *Pinus cembra*. In the meadows near Sion asparagus grows wild, and, on the authority of HALLER, the pomegranate (*Punica granatum*) may be found in the Vallais. Not far from Sierre among the calcareous rocks, the *Cactus opuntia* or Indian fig grows spontaneously. Among the plants which form the *herbarium* of the Vallais may be mentioned *Spirea salicifolia*, *Spartium radiatum*, *Coronilla*

coronata, Stipa pennata, Adonis vernalis, Artemisia vallesiaca, &c.

Our party left Brieg to cross the Simplon the following morning, at five o'clock A. M. We halted for a short time at the station about half way up to the summit; and perceived in several of the rooms beautiful coverlets, which we were told cost at Milan eighty francs each. They were stuffed with eider down, and covered with rich silk. An English carriage passed us near this place, drawn by EIGHT horses, either persuaded to take this number by the natives not having sufficient employment for their cattle, or to enjoy the triumph or pitiable boast of having crossed the Simplon hurled over it by eight quadrupeds. We found a part of the road under repair: it had been terribly injured by the fall of rocks and torrents from the mountains. At the village of the Simplon, we had the pleasure of seeing a very fine *bouquetin*, an animal now extremely rare, and one I had never met with before.

To describe the Simplon, this magnificent monument of human genius and enterprise, would be waste of time and praise, for it has been described and lauded oftentimes before: nor can it be too much extolled; it casts even the labours of ancient Rome into the back ground. This mighty work was begun, under the auspices of

NAPOLEON BONAPARTE, in 1802, was finished in October 1806, and cost twelve millions of francs. The breadth of the road is twenty-five feet, its length forty-five miles: in no place is the inclined plane steeper than five inches in twelve feet; the mountain may be passed in about twelve hours. I have walked over it in fifteen hours. From Gliss to Domo d'Ossola are nine houses of refuge, twenty-two bridges, and ten galleries driven through the solid mountain. The grand gallery is of *gneiss*. To keep this road in repair requires 25,000 francs annually from the government of the Vallais alone. The height of the Simplon village is 4556 feet; of the Hospice 6150; and the height of the passage, or summit, 6174 above the sea's level. The Alpine regions of the passage over the Simplon contain six glaciers; and some idea may be formed of the labour which this road cost, when it is stated, that, on the Great Gallery alone, twelve workmen, relieved every eight hours, were employed *day* and *night*, on each end, for the period of eighteen months, with picks, and blasting the mountain with gunpowder,—torch-light being employed at night. The following inscription is found on the rock:

“ÆRE ITALO MDCCCV.”

While the road is truly magnificent, the sur-

rounding scenery is of a most romantic description, presenting new and varied aspects at every turn; and amid the views unfolded, nature and art appear to contend for the mastery. Over the stupendous architecture of man, "the everlasting hills" seem to frown, and to wage with it an eternal war. We observed on the Simplon the *Artemisia glacialis*, and *Cheiranthus tristis*.

The night closed in upon us before we reached Domo d'Ossola; but a beautiful *Lampyrus splendidula* had lighted up her fairy torch on the road-side, near to the quarry from whence came the white marble of which the Cathedral of Milan is built. I carried it into the carriage with me, and it gave sufficient light to discover the hour of the night by my watch. Early on the following morning we left Domo d'Ossola. The road is in a straight line; the scenery, on either hand, skirted with trees and shrubs, and the eminences crowned with insulated houses, or snow-white villages, with hanging gardens. The vines were trained in festoons, or on frames of trellis-work: the mulberries were mostly young. Walnuts and Spanish chesnuts were frequently met with; and the fields were filled with hemp and Indian corn. Early in the day we arrived at the inn at Baveno, on the Lago Maggiore and the Maitre d'Hôtel is a very good specimen of Italian imposition and roguery. He aspires to

a knowledge of English, an accomplishment for which we must pay dearly, *and only charges twelve francs for his boat* to visit the islands in the lake; while a boatman we met with, who was a very civil fellow, cheerfully took us for *four*. The Maitre d'Hôtel is one of seven brothers, a complete nest of hornets: part of whom act in the menial capacities of waiters, grooms, boots, &c. so as to monopolize all the expenditure of visitors. The fellow knows very well the price of *brandy in England*, and regulates *his prices accordingly*.

I was informed by the landlord of the inn, that he had raised this season about 400 lb. of cocoons of silk, and that the year was a good one. They feed the silk-worm here on the leaves of the white mulberry, which cost from one to two soldi per lb. *grosso*. Females, at this place, are in the habit of wearing the ova, for two or three days, wrapped up in cloth, next the skin. The ova were estimated at ten francs per ounce, and each ounce calculated to produce about 100 lb. (*libra grosso di Milano*). Almost every poor family rears the silk-worm: and on how magnificent a scale could they be reared in the ISOLA BELLA, where artificial temperature is introduced to so vast an extent, and where the luxuriance of exotic vegetation vies with that of tropical regions!

We visited the Isola Madre and Isola Bella. The *Isola dei piscatori* is a sad contrast to its magnificent neighbours, and is the abode of poor fishermen, whose huts are miserable enough. In the Isola Madre we wandered among cedars, and through groves and thickets of jesmines, rosemary, citrons, &c. almost realizing the fabled gardens of Alcinous. In the Isola Bella we went through the Palace: the collection of pictures which decorate some of the apartments is of no great value either to the connoisseur or virtuoso, neither are the mosaics. The peristyle, grottos, and gardens, form, however, a singular scene. In the grottos, which are well worth seeing, are some good copies of statuary. In the creation of all these wonders, the expenditure has been truly imperial; yet the palace remains unfinished, and is likely to do so. In severe weather, the oranges, lemons, and citrons, require protection; the Caper shrub, however, the American aloe, the Indian fig, the Cochineal fig, &c. are seen to grow in every crevice of the rocks that fringe the islands. The temperature of the air in the shade was 75°. I observed that the Chinese method of propagating fruit trees had been successfully applied to many valuable shrubs, as the *Magnolia purpurea*, &c. For about four months, say from November to April, the wall fruit-trees are protected by planks, and

during three of these months, artificial heat is partially applied;—the entire expence for the year is computed at about 2000 Napoleons. The evergreen and flowery covert of the terraces of the Isola Bella, and their decorations of vases and statues, rising from the level of the water, and seen from the verge of the lake, present a spectacle altogether unique—almost a magic scene.

It was in August 1818 when I first visited these interesting islands, and on the Isola Madre, the *Cactus cochiniliformis*, *Caparis* and *Agave* were in flower, and skirted the rocks. Here may be seen the *Quercus Ilex*, 100 feet high, and the cedar of Lebanon, and *Cupressus Ægyptiaca* in equal magnificence. The *Arundo saccharifera*, or sugarcane, grows unsheltered; and, in the summer of that year, I witnessed the *Agave Americana* in flower,—the *flower-stem* was twenty-seven feet in altitude, and its circumference, where it emerged from its foliage, was twenty-two inches: its flowering-canopy above was equally grand: the shrivelled stem is still preserved in a shed, and pointed out.

In the *Isola Bella* we much admired the following: *Magnolia grandiflora*, *M. cordata* (in fine flower), *M. glauca*, *M. tripetala*, *M. purpurea*,—*Mimosa nilotica*, from which a quantity of gum-arabic was last year obtained: the Date

palm (in fruit), *Anona triloba* (in fruit), *Canna glauca*, *Verbena mentha odora*, *Solanum niveum*, *Nerium oleander* : these were luxuriant and beautiful, and of uncommon, not to say gigantic, altitude. We were struck with a fine plant of the *Agave filamentosa* in flower : the flower was THIRTY FEET IN HEIGHT, and had then been in bloom twenty-six days : the plant was stated to be about fifty-six years old. In this island is a fine cypress, eighty feet high, and the *Laurus nobilis* ninety-three feet high : it is indeed a noble tree, and in the bark may be still traced the word "Battaglia," which NAPOLEON BONAPARTE cut with a knife, two days before the battle of Marengo.

Every plant here bears a corresponding feature, and not the least remarkable in the train of vegetation is the *hydrangea*. From its beautiful assemblages and tasteful arrangement, in groups or clumps, encircling the larger trees, it becomes exceedingly picturesque, and has altogether a most striking and extraordinary effect. The earth in which the hydrangeas grew, was a black sandy soil, and two phenomena were here remarkable,—their extraordinary size, and their beautifully blue colour. Two conditions, I was told, were essential for sustaining this luxuriance and colour :—to plant them where they might be constantly in shade, and in a soil formed of

heath-earth (terra di erica). The hydrangea is to be seen *ten feet high*, and *five months* in flower; I noticed one plant fifty feet in circumference, which the year before, had carried 616 bunches of flowers, each larger than the human head.

From Baveno we went to Arona, where we remained for the night, and left the Auberge Royale the following morning, to see the colossal statue of San CARLO BORROMEO: many of the chapels at the several stations on the ascent of the *Sagro Monte* (Sacred Mount), seemed to be in ruin and deserted, or nearly so. Among other exhibitions we were shewn the room in which the *saint* died, and a masque of the face in stucco, taken after death. In addition to these interesting matters, a little of the *saint's blood*, though CARLO BORROMEO was not a *martyr*, was shewn us, and also pictures, extremely silly, and the veriest daubs, representing the saint's *miracles*, which exceeded *one hundred*. Among the relics of the Sacred Mount will be found "Un anconetta d'argento elegante, e ricca nella sua semplicità, ove se ne contano sessanta due, le prime delle qualli, in numero di otta, sono consacrate dal contatto di nostro Signore *." CREDAT JUDÆUS APPELLA, HAUD NOS. A copy of the interesting evidence by which this authority is substantiated,

* Memorie intorno il Sagro Monte, &c. Novara 1823.

would certainly be a precious gem from the antique.

On the summit of the Mount, erected on a pedestal of white and red granite, stands this colossal statue, the design of FRANCESCO RICCHINO *senior*, and was erected by order of Cardinal FREDERICK BORROMEO on the Mount of San Carlo, in 1624. According to the original intention, this statue, which is of copper, was to have been *gilt*, and it was only in the year 1818 that it was bronzed, to protect it from the injury of the weather. It is said that Signore Count JOHN BORROMEO laid the first stone of the pedestal, and that a gold medallion was deposited therein, having the following distich :

JOANNES ADOLOSCE TUI VIRTUTE PARENTIS :
ALTER VIRTUTUM MOLE COLOSSUS ERIS.

The saint is represented in the act of giving the benediction, with the right hand in the same manner I had witnessed employed by the late Pope PIUS VII. at Rome. The left hand holds the breviary. The staircase within the pedestal is composed of forty-eight steps, and another from the pedestal to the right knee, contains seventeen steps. The statue is, however, now entered by scaling-ladders, through the folds of the robe, on the right; and from thence, by a

stair-case within, we may ascend even into the *cranium*. The cost of the statue and erection amounted to L. 36,666, 13s. 4d. Sterling, or 1,100,000 *lire milanese*. JOSEPH II. called it one of the wonders of the world, and its dimensions are certainly of the most gigantic description. There is a comfortable seat for any *catholic* in the nasal promontory, but we think a *heretic* would scarcely risk an adventure within the nose of this Brobdinag saint: nearly a dozen persons could be packed together in the breviary.

The following are the dimensions of this colossus in Paris feet: Pedestal 36 feet high; statue 72 feet; circumference of the head 20 feet; length of the face 7 feet 6 inches, breadth 7 feet 2 inches; width of the eye 1 foot 6 inches; width of the mouth 2 feet 4 inches; length of the arm 28 feet; height of the breviary 13 feet, breadth 6 feet 6 inches; breadth of the hand 4 feet 6 inches, length of the finger 4 feet 3 inches, length of the forefinger 6 feet; circumference of the robe 54 feet, breadth of foot 4 feet. We did not ascend into the statue, as the scaling-ladders from without seemed very insufficient and precarious, and with every allowance made for the cohesion of the vegetable fibre, they bent so much under the weight of our attendant, and presented so formidable a curve, that we consulted our personal safety in

waving the hazardous experiment. Altogether the saint is placed on a most commanding station, and the vision of this extraordinary statue is quite startling, by its colossal form and dimensions. We thought of the *Sphinx* near Cairo, on the seat of the ancient Memphis, and compared them. In this last, which is sculptured in the solid rock, the paws project from the body fifty feet, and between their guardianship a small temple is erected: the distance from the chin to the ear is fifteen feet. When Pope GREGORY XII. heard of the death of Cardinal Archbishop CARLO BORROMEO, which happened on 3d November 1584, he is stated to have exclaimed, “*Extincta est lucerna in Israel,*” *The lamp is put out in Israel.*

On descending the *Sagro Monte*, or *Monte San Carlo*, our olfactory nerves were regaled by the wild thyme and other odoriferous plants, and I gathered a bouquet of the flowers of the *Cyclamen europeum*, both white and purple. On our return to Arona, we took a peep into a *Purgatorio*; a very singular exhibition to a protestant. Numerous skulls were methodically ranged on shelves in amphitheatrical form, like flower-pots on the stage of a green-house; each skull was supplied with a paper-cap, with the owner's name on a scroll,—thus, “*Luigi Piollo morto 11° Aprilo 1814,*” — and so on with others.

In many parts of Italy we have noticed the adjunct "Pregate Dio per animo." In the market at Novara, the grapes were 7 soldi (3½d.) per *libbra grosso* (100 *libbra grosso* being equal to 168 lb. avoirdupois), and fine large peaches were sold at the same rate, by weight; the *libbro grosso*, or heavy pound, contained about ten. The young mulberries were all protected by hay-bands, twisted round their stems, the winters being occasionally severe; a practice of thatching that has been found eminently serviceable by some of the horticulturists of France. We quitted Arona, and arrived at length at Sesto Calende, but the police on this frontier of the Lombardo-Venetian kingdom, having narrowly inspected all the passports, discovered that one of our party was without the signature of the Austrian Ambassador, a condition made imperative and essential to all who enter the territories of the Emperor of Austria. I had before mentioned my fears, that, in all probability, this circumstance would present an insuperable barrier to our advance together. Having been instructed in this on a former occasion, I knew the importance of getting the signature of the Austrian Ambassador at Berne, which is easily obtained. All that I found necessary to do, was to enclose the passport *by post*, respectfully soliciting the honour of his authority

to proceed to Milan, and it was returned to me at Lausanne, in due course, under envelope. We were extremely sorry for this annoyance, and did not wish to quit our interesting and amusing *compagnon de voyage* quite so easily, or without a struggle; we were therefore determined to try the other pass, *Buffalora*. On crossing the Ticino river, we observed a *tronc* for the collection of alms for the *dead*. I thought we did much better at home, for considering the dead disposed of, our contributions were for the support of the living. It rained, and one of the boatmen was literally thatched with straw, and much resembled a bee-hive in its winter dress, surmounted by a human head with a conical cap. One of the other *dramatis personæ* was a poor fiddler, who scraped the crazy string, and doled out a characteristic pitiable ditty. In the fields bordering the road side, we observed *lupins* among the cultivated *legumes*. The common acacia (COBBET'S honey locust) and mulberries, in the form of *pollards*, for the supply of the silk-worm, fringed the road; rice and Indian 'corn prevailed generally.

We arrived late in the evening at Novarra, and by inquiries understood that the white mulberry was always preferred for rearing the silk-worm. Count DANDOLO gives, however, a decided preference to the wild or uncultivated mul-

berry for this purpose: the leaves here were sold at 1 soldo (about $\frac{1}{4}$ d.) per lb., and one ounce of ova was calculated to yield 100 lb. of silk; the season was esteemed a good one for rearing the silk-worm. On the following morning we perambulated the market. Two small fowls were rated at about a frank. Among the peculiar features of the vegetable market may be mentioned mushrooms, *chicorée*, the fruit of the *purple* egg-plant (that of the white variety I have never seen exposed for sale any where), gourds and pompions in variety, the water-melon, &c. The price of a fine melon was 6 soldi, and that of Indian corn-flour 9 soldi per libro grosso. At Buffalora, where we arrived at nine o'clock, the subject of the passport was again canvassed, and we found it quite impossible for our friend to proceed with us. It was therefore agreed on that he should remain there, while I took charge of his passport to Milan, as the signature could there be obtained.

Before we left Buffalora, we visited an extensive establishment for unwinding the silk from the cocoons; in two rooms, women were arranged opposite each other, and conducted the process: the cocoons, contained in baskets on one side, were thrown by handfuls into caldrons of heated water. Each by a *whisk* (of peeled birch) collected the threads *en masse*: the first confused

portions were rejected, till the threads unwound regularly, freely passing over glass-rods to prevent the injury of friction. When the threads came off uniformly, the cocoons were raised suspended to the hand by their respective threads, and thus handed over to those on the opposite side, who, in their turn, threw them into caldrons of water, the temperature of which was nearly that of blood heat—thus sustained by a steam-pipe. The water was kept clear, and the silk preserved pure and unsoiled. From these the threads were finally wound on reels. The proprietor informed me that this establishment cost 60,000 francs.

GENSOUL of Italy has invented an apparatus by means of which the water is heated through the medium of steam, and the nymphæ that fall are collected on a grating of iron-wire at the bottom of the boilers, which is frequently raised for the purpose of removing the husks. By this ingenious method much fuel is saved, one furnace with its boiler serving to heat twenty vessels, and from the decreased temperature the cocoons do not suffer any decomposition or change, as is the case in the ordinary way, wherein they are immediately exposed to the direct agency of the fire. Another saving might still be effected by this method, in the substitution of vessels of wood for boilers of copper.

Before we left Buffalora they gave us a receipt for our luggage, expressing with due particularity the hour at which the search was made, namely *nove ore* (nine o'clock);—the packages were then sealed, which prevented a second scrutiny on entering the gates of Milan.

CHAPTER VI.

MILAN—RETOUR VIA COMO—TOURTEMAGNE AND
CASCADE—SIERRE—SION—GOITURES.

IT was about three o'clock in the afternoon of the 6th of August when we arrived at MILAN, the capital of the Lombardo-Venetian kingdom, and alighted at the *Albergo dell' Gran Bretagna*, having received at the entrance of the city a *carta di sicurezza*, in exchange for our passports. The passport of our friend, with which I was entrusted, was immediately left, with the requisite explanation, at the office of the *Intendente di Polizia*, who, however, was absent in the country: but, after a good deal of trouble, and a delay of two entire days, it was returned, with authority for him to proceed to Milan, and I duly transmitted it by a special messenger to Buffalora. I was informed at Milan that the silk was dearer this year than last, owing to the chilling winds from the Alps, and rain in the early part of the

season. Last year, the raw silk cost forty-five *francs*, the present year it was valued at from fifty to sixty-five *lira-milanese* * per pound of twenty-eight ounces. The white is always most esteemed. At Vicenza much silk is reared ; and almost all the silk cultivated in the Lombardo-Venetian kingdom is sent to be manufactured in France. In the vicinity of Milan, the crop in chief cultivation consisted of Indian corn and rice.

On Sunday morning, the album of the inn was brought us for the due registration of our names, where we came from, whither we were going, objects of our journey, &c. ; and we were exceedingly surprised and delighted to find that the names which had immediate precedence of ours were those of relatives, who were returning from Madeira, and were so far on their journey home. They had landed at Naples, and had traversed southern and central Italy. This happy rencontre was as gratifying as it was unexpected. We had not heard of them since we left the British shore, and supposed that, long before that time, they would have returned direct to England. They had made arrangements for leaving Milan on Monday morning, and but for the album, might have gone without our having

* A *lira-milanese* is nearly equal to sevenpence half-penny.

enjoyed their society, though at the *same inn*, for, being Sunday, we had both adopted seclusion. Here is a most material advantage in these albums, which are duly communicated to the *Commissaire de police* ; and, it is likely, compared with the several passports in their possession. We cannot, therefore, impress too strongly on the reader, who may be desirous to travel on the Continent, the risk that he may incur by any *false entry* of name, occupation, object, &c. We have seen many ridiculous insertions of this kind ; and though it may pass unnoticed in some parts less rigid, the vigilance and strictness of the Austrian police are not to be hoodwinked: for instance, Mr S——E, we found, had always entered his own name along with that of his white poodle dog “Beppo,” whom he had instructed to refuse every thing offered in the name of “Imperatore d’Austriaca,” but to accept what was presented in the name of “Napoleone Imperatore.” By means of these albums, you can easily trace the route of your friend, and the date when he passed in that direction ; or, in the event of your preceding him, he receives a clew enabling him to follow you. We observed a striking example of their utility at Chamouni: an apology was inserted by a gentleman for having cut out a slip from one of the leaves in that at the Hôtel de l’Union, as it

contained the autograph, name, and register, of a gentleman who had not been heard of for several years by his family, and was believed to be dead: the document was transmitted by letter to his relatives in England.

In company with this new and much valued accession to our party, we visited the *duomo* or cathedral, a splendid edifice, and the largest in Italy, that of St Peter's, at Rome, alone excepted. This superb fabric was commenced in 1386, but remained unfinished till the reign of NAPOLEON BONAPARTE, who ordered its completion from the designs of AMATI; and it was finished under the auspices of the EMPEROR of AUSTRIA. It is constructed of WHITE MARBLE, in gothic style, and adorned with fretwork, tracery, niches, statues, &c. in rich relievo. It is 445 feet long, 289 broad at the transept, and 356 high, calculating from the pavement to the top of the spire. We ascended to the noble roof, and the loftiest turret of the *duomo*, and among its pinnacles and spires, had a fine promenade, while we enjoyed a magnificent range of vision from every point and resting place. The plains of Lombardy, and the Alps—barrier of Italy—lay before and around us; and the nine roads surrounding the capital as so many radii from a centre. One of these we had already traversed; another conducted, *via* Verona, to “the Rome

of the ocean," Venice; another to Turin, or, deflecting to the right, terminated at Genoa; another to Parma and Florence, "the Eternal City," and Naples; and one pointed to Lodi, and Mantua, the natal soil of PUBLIUS VIRGILIUS MARO, a deathless name in classic song. These lands were possessed by whatever was noble, sublime, or beautiful, in the name of Roman. It is not, however, by any means my intention here to luxuriate among the loveliness and fascinations of this beautiful and classic land; as I may possibly, at some future period, enter into detail concerning Italian scenes, and all their enchanting interest. This magnificent monument of genius and of art was as white as the snow that covered the highest summit of Mount Rosa, the effect of a recent application of dilute sulphuric acid, with which its walls were washed, and which had dissolved the dark superficial film, and discovered a new surface of dazzling whiteness. We afterwards descended by a staircase into the subterranean chapel, where repose the remains of St CARLO BORROMEO, in a crystal coffin, with *silver* ornaments *gilt*. Within this crystal dormitory, suspended over the remains, is a golden crown, the votive offering of the Empress MARIA THERESA. The rich cover over the *sacred deposit of gold and jewellery, silk and satin, &c.* was raised with all due pomp; and a

lady of our party having presumed to touch one of the rings, was duly admonished, and reproved for the *impious* adventure; but a few words muttered over it charmed it into holiness again. The walls of this chapel are wainscoted with rich and costly basso-relievos, all of pure silver, representing the principal miracles and events of the saint's life, the designs by CERANO, executed by RUBINO. The entire cost of this imperial waste was L. 166,666 : 13 : 4. Above the grating, which overspread part of the dome of this chapel, we observed a few lamps, with wicks, certainly inflamed, but winking in their sockets, and a few centessimi that had been cast upon the wire-grating, the votive offering of some poor devotees, who had perhaps given their all—their widow's mite: a centesimo is the one-hundredth part of a franc; two and a-half would make a farthing.

The ices in the coffee-room adjoining our hotel were excellent, and we enjoyed them exceedingly, as the weather was very sultry. In the markets were ripe almonds, and figs in abundance, fine melons, the fruit of the purple egg-plant; and the water melon, which we found most refreshing when parched with thirst. Among the curiosities *à la gourmand* at the table *d'hôte*, was a *dish of cockscombs stewed*. The reader must not make any mistake here; I do not mean the pretty

plant so called, the *celosia*, but the *veritable* crests of the king of domestic birds. The fruit of the purple egg-plant we found excellent; it very much resembled in flavour the vegetable marrow, and squash. Among our perambulations through this certainly fine city, we visited the portico of the church of *San Lorenzo*, with its fragment of the ruins of the Temple of Hercules; the church of *San Alessandro*, with its rich altar of agates, jaspers, lapis lazuli, &c. &c. As an imperative duty and privilege, we paid our tribute of wonder and delight before the celebrated *al fresco* painting of "The Last Supper," by LEONARDO DA VINCI, in the Refectory of the convent of *Santa Maria delle Grazie*: it is grievously defaced, but its magic remains are yet sufficient to concentrate the entire admiration of the soul, and we pity the stoic who can contemplate this *chef d'oeuvre* of excellence unmoved. I do not profess to be a connoisseur in the paintings of the celebrated masters, and could perhaps scarcely determine a CARLO DOLCE from a GUIDO RENI; but I must confess this is a painting I have left with emotions of unfeigned regret, and the longer I have gazed on its charms the more I have been fascinated. Some new excellence has started from the wall at each successive glance; but I have wondered at the incongruities of the celebrated Transfiguration of

RAPHAEL, and sickened at the absurd, not to say blasphemous, representation of "The Spirit of God" in the First Creation, as pourtrayed on the ceiling of the Vatican; and I have gazed with pitiful contempt on the also *celebrated*, yet to me confused and incoherent, rapsody of the Last Judgment—the *al fresco* of MICHAEL ANGELO. But here is *true keeping* and *true feeling*, with all the mystic virtues of *chiaro-scuro*, gracing their originals. We, among other etceteras, had a peep at the Bibliotheca Ambrosiana, founded by CHARLES FREDERICK BORRAMEO. It is rich in curious, antique, and valuable manuscripts; for instance, that of DA VINCI, with about 40,000 tomes. I am not, however, fond of an *in transitu* glance at a collection of books, when I cannot enjoy their converse; they should be something more than raree-show.

We had a fine morning walk to the circus, or amphitheatre, the erection, under NAPOLEON BONAPARTE, of CANONICA. It was originally meant to be appropriated to games and horsemanship, and is capable of containing 36,000 individuals. On our return from thence, we went to the unfinished triumphal arch—the *gate* of MARENGO, intended to commemorate the completion of the road of the Simplon. The magnificent relievos, destined for the decoration of its frieze, lie now neglected, but surely not

forgotten. We cannot see what could be done with them, or how the name or deeds of FRANCIS Emperor of Austria could with either justice or propriety usurp their place. They represent various triumphs and trophies of NAPOLEON; and such a triumph of art over the formidable barriers of nature, deserves some memorial to perpetuate the achievement to a distant age, and surely the *basso-relievos* are too costly and too beautiful to be obliterated or consigned to oblivion. Shuddering though I do at the warlike deeds which darkened the tumultuous soul of NAPOLEON BONAPARTE, I would nevertheless chisel out on his tomb ULTIMUS ROMANORUM; nor could I deny the tribute, after contemplating his roads, bridges, triumphal arches, noble edifices, superb relievos, and majestic columns. I do not like war, and turn from the warrior affrighted. But these national monuments tell upon a distant age, and are among the most splendid legacies, next to the securities of religion, that can be bequeathed by any nation to its posterity.

The bread served out to the soldiers seemed almost black; we saw several waggons loaded with it as we recrossed the *Place d'Armes*, on our return to the inn.

During our stay at Milan, which did not much exceed three days, we filled up our time

as well as we could with the various sights with which the metropolis of the Lombardo-Venetian kingdom abounds. The *Piazza del Duomo* is a fine open square. Near to the walls of the cathedral many bird-catchers take their stand, and a number of tame birds may be seen hopping about in a little enclosure, with a fountain playing in the midst, or engaged in some manœuvres, in which they are carefully instructed by their cruel owners, such as adjusting their plumage before a looking-glass, drawing up little buckets of water, or opening the lid of a box to procure food. These horrid wretches have the brutality to put out the eyes of many of their poor prisoners, to ensure a sweeter song; but persons who could listen to these plaintive dirges, bought at so painful and barbarous a rate, deserve no place in the society of man; the desert should be their dwelling place. This seems a proper training for the murderous *stiletto*, which Italian catholics know so well how to manage, many proofs of which are disclosed daily, and we have seen the victims in the *Casa di consolazione per i feriti* at Rome. The weather at Milan was very warm, 75° Fahr. on the average; and we were beset by innumerable hosts of that annoying little insect the *Pulex irritans*, Anglice *flea*, and the stinging fly (*Musca calitrans*.)

We left Milan by our *vetturino* on Wednesday

the 10th August, and arrived at Como at two o'clock, where we remained for the night. Olives, mulberries, vines, and all the favourites of the orchardist, occupy their place around the town. Our time would only permit a hurried survey of the city—a visit to *Pliny's Elm*, and other elms still “reverend,” though of less classic note—a peep at a “purgatorio,” with its well arranged crania and plaster exhibitions of flames, personifications of the “Prince of Darkness” and his torturing *imps*, and scrolls and inscriptions, all designed to frighten the “faithful” to almsgiving towards the rescue of these, “alas ! poor ghosts ;” to receive which a *trunc* is placed in due form and position. Our chief object, however, was Como's Lake, and the *Villa Pliniana*, with its celebrated intermitting spring. We accordingly embarked on our aquatic excursion, but were unfortunate in the weather, and found it impossible to reach our ultimate destination ; a thunder storm suddenly arose, accompanied with heavy rain, and we were necessitated to land for shelter at a cottage on the right bank. From this spot we had a favoured view of the opposite verge of the lake, and were content to contemplate the *Villa Pliniana* in the distant perspective, as we found it useless to contend with the wind, which was sore against us. We were obliged to return to Como, the wa-

ters of the lake had put on the aspect of a stormy sea :

Fluctibus et fremitu assurgens, marino.

The wind, however, being in our favour for returning, we arrived before night cast his sable mantle over the sky. On our right was the *Villa d'Este*, once the residence of the late Queen CAROLINE. A theatre and a church form its wings. From the garden walls, overshadowed by their graceful leafage, a row of weeping willows bathed their branches in the waters of the lake, and, agitated by the breeze, looked lovely. The situation of Mont Rosa was pointed out to us, but dense clouds veiled its summit.

In pursuing our route the following day, we passed through *Sesto Calende*, and had some curious disputation with his Majesty of Sardinia's faithful subjects and servants : the chief of the posse duly announced himself as the "representative of his Majesty," and made *lawful prize* of some Leghorn ware. After mutual recrimination, and high words, *pour et contre*, it was surrendered, and though an unpleasant rencontre and delay, it served as a kind of *decoy* to abstract the talons of these *omnivorous falcons*—genuine birds of prey—from searching too closely into our luggage, where they might have found many valuable gems of natural history, which would at least have been destroyed by their rude touch,

and would soon have crumbled into debris—a *memento talus* of the barbarism of almost sayage ignorance. Knowing what we had to expect, the few books we ventured to take were concealed on our person, as, for aught we knew, the discovery of a Bible might have brought us in contact with the Inquisitors and Inquisition. I hate the society of bats and owls, which court the night; every such remembrance fans anew the *amor patriæ*, where, “though our deeds be reproved,” we do *not* “shun the light.” This is the *punctum saliens* of Britain’s glory. Here we were treated at the inn with *soupe à la plume*, alias *feather-broth*. One of our party, more curious than the rest, from some foreboding, judging unfavourably perhaps from our reception into the confines of Sardinia’s king, having gone into the kitchen, beheld with his proper eyes “the whole art and mystery” of an Italian cuisine. A poor fowl was killed and scalded in a vessel of boiling water to bring off the feathers, and this water, with its solution, was in due time converted into soup; and the said soup, when brought to table, actually discovered part of the plumage it had served to detach. It, as well as the fowl, was soon dismissed, of course, from our table, as the account we had heard was *quite satisfying*, so far as they were concerned.

As from Sesto Calende we were merely retracing the steps we had passed over the preceding week, I shall not detain the reader by recapitulating the scenes we witnessed ; suffice it to say, we passed through Varese, where we made inquiry about the culture of the silk-worm, and ova.

We next arrived at Arona, and revisited with our friends the statue of SAN CARLO BORROMEO. At Baveno we enjoyed an excursion on the lake to the Borromean Islands, reached Domodossola on Friday, and crossed the Simplon on Saturday. About mid-day, the air was 62° Fahr., water 53° Fahr. We arrived at Brieg in the Val-lais, late in the evening, where we remained till Monday morning, and on that day rested at Tourtemagne, and revisited its beautiful cascade. This fine waterfall may be compared to a descending sheet of snow, terminating in a fountain of snow beneath, of a somewhat bluish tint toward its centre, and blanched still more toward its verge. We were detained here at a very wretched inn, where the wines were intolerable, and the charge shameful. The dress of the landlady was of the most grotesque and fantastic kind, and sets at defiance any description of mine ; she was, however, in her " Sunday's best," it being a grand saint day. We were sadly afraid of being kept here

for the night, as a terrible debacle had already destroyed the road three miles onward toward Sierre. The scene of destruction was truly formidable and frightful, and the devastation very extensive. The bridge was torn away, and buried beneath the ruins; rocks were scattered here and there over an immense surface, and the Rhone was filled up by the torrent of rocks, which the alpine cataract had hurled into its bed, and contracted to nearly one-fourth of its original width. Though numbers of people had been employed the entire day previous in temporarily repairing the road with brushwood, &c. we found crossing a matter of some difficulty; however, with the aid of two good horses, and the persons on the road, the vehicle was transported across, though in great danger of being overturned, while we waded in the best manner we could. Horses and waggons had, previous to this labour, been almost swamped in passing. The temperature of the Rhone here was 52° Fahr. Near this is a bridge across the Rhone, conducting to the baths of Löèche, which are *thermal*. At the chief source of these springs, the temperature is 128° Fahr, and supplies five to six cubic inches in a continued stream. Some of the streams deposit peroxide of iron, but that called the *Hielbad* is the most remarkable for the animal and vegetable being

which it nourishes. The temperature is 120° Fahr.; and yet the bed of its stream is carpeted with a kind of *conferva*, and its edge fringed with the same plant; add to this, *larvæ* of the *Musca Cameleon* float sportive in its tepid waters, in which an egg may be tolerably cooked. We remained for the night at Sierre, at a comfortable inn, rendered more cheerful by the pleasantry of its inmates. Our supper (for really the Roman *cenæ* is even now, especially in Italy, kept in remembrance, and serves as the principal meal) was good; among the numerous dishes was the *wild pigeon*, which is often shot in the woods. The church of Sierre sported its best vestments, and the people wore holiday suits, as it was a *fête*. A good many bees are reared about Sierre: and the wine is remarkably fine, chiefly white, and possesses somewhat of the raisin flavour; wine has been made in this vicinity, which has brought five francs the bottle.

On the road next morning, toward Sion, we noticed several mountain slips, and near to the capital of the Vallais, the divided Rhone embraced several small islands, crowned with trees and pasturage for cattle. I perceived the *Dipsacus fullonum* among the way-side plants. Early in the day we arrived at the town: the cisterns were of *lapis ollaris* or potstone. One of the foun-

tains had the date of 1819. The temperature of the water of three different fountains, which are springs, were 54°, 55°, and 56° Fahr. : the mean temperature of this part of the Vallais for the year, may therefore be stated at 55° Fahr. We took a walk to a convent of Capuchins; they were engaged, perhaps at dinner, and we sauntered into the garden in the mean time, but saw nothing but one of the miserable dirty wretches who belonged to the convent, an armless friar, filthy like all his brethren of the Capuchin tribe, for they are most neglectful of personal cleanliness. The garden was tolerably supplied with leeks, cabbages, and water melons, but the only shrub or flower was a *marvel of Peru*, and I marvelled how it got there. Over the entrance gate was this *elegant compliment* to the fair sex, written in chalk :

“ Pessima res mulier est,
Beatus cui hac caret.”

On our ascent to this beggar's den, we noticed a shrine erected to the Madonna, with a promise on the part of the bishop of Sion of *an indulgence of forty days* for singing or saying a *specific quantum* of Ave Marias ; as the day was a fête, the natives were as listless and as lazy as could be. There repose here the bones of a saint called WILL: many are his miracles, and truly numerous were the pilgrims. In our inn I noticed a cu-

rious zoological barometer formed of the *Rana arborea*. A glass jar with two or three inches depth of water, contained a few of these little frogs, with a minute ladder inclined to the side. When the weather was good, and likely to continue so, they mounted the steps, and when the weather was bad, they descended and slept at its foot: a few flies given them occasionally is all the food they require. In a state of freedom, they climb trees in search of insects, hence the specific name; and make a peculiar noise before rain.

I called on a medical gentleman, and had a good deal of conversation with him on the subject of *bronchocele* or goitre, and he informed me that the *hydriodate of potassa* applied with lard externally by friction as an ungent, had proved in almost every instance eminently efficacious in obliterating the tumour, which had been in many cases extremely large. Water boiled at Sion at $206^{\circ} 5'$, oscillating to 208° Fahr. while the air was 69° Fahr. Whether or not this singularity was attributable to an electrical cause, I do not presume to determine, but I feel persuaded that this method cannot be satisfactorily applied to the measurement of altitudes. In 1818 I was with Captain BASIL HALL, when this experiment was repeated on the Simplon, with an instrument constructed under the immediate

sanction of Reverend FRANCIS WOLLASTON, and it was found that the results did not at all assimilate with those indicated by the barometer. An analysis of the waters of the fountains which supply the town, gave me evidence of *sulphates of lime* and *magnesia, muriate of soda, &c.* We went to examine an hospital not far from the inn, served by the "Sœurs de la charité," here called *Sœurs blanches*. A laughing sylph, about twenty-two years old, led us through the building, which seemed good in its arrangements, and certainly the devoted services of these useful and meritorious women command our respect and admiration. On the road toward Martigny we were amused with a person who exhibited his musical powers, on to us a new kind of instrument, and one of the most simple form; it consisted merely of a *leaf* rolled up like a fillet, kept almost entirely within the mouth. The tone much resembled that of the clarionet.

We arrived at Martigny on Tuesday evening about 7 o'clock. I called at the Priory of the Augustins, and was introduced to the venerable prior, whom we had previously seen at the Great St Bernard. I had some pleasant conversation with him, and was glad to find he had much recovered from his indisposition. He informed me that the weather had been constantly bad since he had visited the Hospice. Four monks

always reside at the Priory ; and when any are ill at the St Bernard, a conclave is held as to the substitution. I went over the building ; the beds were very common, and some of the rooms seemed under repair ; that in which NAPOLEON slept, was particularly pointed out. The upper floors seemed chiefly used as granaries. The Refectory was being painted. They had just dined, and silver salvers with macaroons, fruits, &c., and various wines, still remained on the table. At Martigny, water boiled at 110° . The temperature of the fountain was 52° Fahr. The water was tested by the usual chemical reagents employed in analysis, but they produced no effect whatever. I inferred from thence that the water was remarkably pure and wholesome. The mean temperature for the year at Martigny may be stated at 52° Fahr.

We left Martigny at six A. M. The clouds were low, and possessed a very aërial character : they seemed to sleep tranquilly on the bosom of the mountain. The temperature of the Dranse was 43° , and that of the Rhone 50° . The small patches of pasturage on the left were enamelled with the autumnal crocus : on this side we visited the cascade of Salanche, and, as we circumscribed our station, had full in front the various segments of the semicircular arch, glowing with all the colours of the iris. On the right the rainbow became

extinct. Though wet with the spray, we were tempted to approach it laterally, as near as we could, to see the magnificent crystalline arc formed by the descent of the waters. By thus viewing the considerably projecting curve of sheeted water, we could form a tolerable estimate of its thickness thus apparent at the edge. We came at length to St Maurice, which may be called the portal of the Vallais. Not far from hence, legend tells us, that the Christian soldiers of the Theban Legion were destroyed by the Emperor MAXIMINIAN, in the year 320. The bridge displays a lofty arch, and the gate at its extremity is shut every night. About three quarters of a mile from St Maurice, is a hermitage, and on a dangerous precipice, and at a vast altitude, a chapel of *Notre Dame du Sex*—what an ubiquity (*omnipresence* we had confined to Deity) is possessed by our Lady, and how protean and diversified are her names! This hermitage, I believe, is still tenanted by a poor man, who has been blind many years, and the truly dangerous pilgrimage is made by him twice a day, by a tortuous and precipitous path, to the aërial Madonna. We observed in St Maurice the mistletoe here and there suspended over the doors of the houses, and it was interesting to witness the singular contrast of Catholicism and Protestantism. On one side of the bridge we found all the happiness

of home, the smiles of plenty, and the cheerfulness of industry; and, on the other, want and wretchedness, and filth, the invariable features of a catholic country:—we never saw an exception to this rule.

That hideous disease called *goiture*, and that obliteration of mind called *cretinism*, seem both *endemic* in the Vallais. The former often attains a magnitude, of which we can in this country form no conception, though in Derbyshire these glandular excrescences are sometimes formidable. After crossing Mont Cenis, from Turin into Savoy, we have, between the foot of the mountain and *Aiguebelle*, met with *goitures* so monstrous, that they were literally encased in a sack, and cast over the shoulder, to avoid being trampled on; and in one small town, we were informed that more than one-half the inhabitants were the victims of this extraordinary expansion and elongation of the thyroid gland. According to our repeated observations, this dreadful disease is *found only in such valleys* as contain a humid and stagnant atmosphere, where a free circulation of air is excluded, by the valley being, as it were, shut up at one or both ends. Of this description the Vallais is an example, and some valleys in Savoy illustrate the same position. This, too, will be found the features of the locality in Derbyshire, and near Wrexham in

Denbighshire. That persons under the influence of goitre may emigrate, is evident; and it is therefore clear that we cannot calculate from an insulated fact, presented here and there in the plain. We must have palpable evidence of the indigenous or native seat of the disease, where it grows spontaneously. The conditions stipulated will be found the invariable accompaniment; at least I am acquainted with no well defined or characterized exception. Diversified, indeed, have been the opinions entertained on the *cause* of this disease, and these contrarieties have been numerous,—nor has any satisfactory opinion been adopted. Some have ascribed it to the air, some to water, some to one thing, some to another. We think, however, that when the evidence is properly weighed, there can be only one safe and decided conclusion, that which ascribes it to the stagnant vapours in the lower atmosphere, unchanged or unrenewed by the breeze; but, in conjunction with other circumstances,—when the cuticular surface, after being exposed to a high temperature, and thus having the orifices of perspiration opened, is suddenly checked by cold proceeding from radiation, &c. while the system still remains in the dense and humid atmospheric medium. As we ascend toward the Alpine height, the goitre, which was perceived so common in the valley, gra-

dually disappears, and finally entirely vanishes, leaving not a trace behind; for instance, between Chambery and the lofty range of Mount Cenis. There are two villages in the Vallais, a little elevated above the valley, almost opposite to each other: one has a *south*, and the other a *north* aspect; the former is overrun with goitre, while the latter is without a single example. To those who have ascribed it to drinking *ice-cold water* merely, it may be sufficient to reply, that, in lofty regions, where the only beverage is the water of the glacier, the disease is entirely unknown; and, with respect to the opinion that attributes it to *extraneous* matters dissolved in the water, we might ask, Why is the disease not endemic in those districts of Norfolk, where we have analytically found the water so very "hard," and so exceedingly charged with sulphate of lime? And at Martigny, as has been stated, the water used is exceedingly soft, being free from foreign impregnation. As to the *mean* temperature of the year at Martigny or Sion, as deduced from that of the springs, there appears no clew or data whatever. The mere beverage of ice-cold water *alone*, without any other adjunct, is, in like manner, insufficient to account for the phenomenon, because, among the higher Alps, water at 33°, as we have found when in a state of fevered excitement,

is perfectly safe and innocuous; whereas, we should not have dared to repeat such an experiment under similar circumstances in the plain. But goitre, it is evident, may be produced by drinking water at a very low temperature, when the medium in which the system is plunged is uniformly high, and where, as in a stagnant valley, there are few fresh currents of air to renew the atmosphere, which hence necessarily remains humid. The system is thus *unequally* balanced: it is acted on from the *interior* by the ice-cold water, and from *without* by an atmosphere raised from 70° to 80°, and loaded with vapour. There seems to me no doubt whatever, but attention to the temperature of the water would entirely deface the prevalence of goitre, and means the most simple would accomplish this desirable end. A dark stone heated in the sunbeam, or otherwise, would raise the temperature of the water, and this maintained about the mean temperature of the year in the Vallais would be quite effective.

HALLER attributed the goitre to the pernicious influence of noxious currents of air sweeping through the valley. M. REYNIER and others have noticed, that goitres, accompanied with cretinism, are more frequent in sheltered places, where the air cannot be purified by being renovated. Dr ZINC seems to think that the goi-

ture may be produced artificially, by drinking cold water, when heated, and be again dissipated by drinking much warm water. He succeeds in extirpating the goitre, by employing iodine as an unguent, and, if rightly prepared, it does not stain the skin. He has even succeeded by applying it to a totally different part of the animal surface. I have rested long on this topic, but I feel its vast importance, and am anxious to contribute my personal observations and reasonings, induced by the facts presented to view in the course of my inquiries. In the poor *cretin*, the Scripture language is literally verified: "Eyes have they, but see not; they have ears, but hear not, neither do they speak from their throat:"—they are the automata of human nature,—locomotive indeed, but the mere mimic of their exterior,—the floating wreck of matter; for the edifice of mind is in ruin, and the external senses seem obedient to no volition.

CHAPTER VII.

BEX AND ITS SALINES—GENEVA REVISITED—
 SUNDAY—FÊTE D'EAU—YVERDUN—NEUF-
 CHÂTEL.

WE arrived at Bex about eleven A. M. on the 17th August, and paid an early visit to the salt mine, or rather Brine Springs. We had an interesting walk along a fine declivity, commanding an extensive view of the rich alluvial pasturages beneath—the *spolia opima* of the rapid Rhone, embracing a verdant isle in the arms of its embouchure. We entered the galleries of the Saline by the principal entrance to the Grand Reservoir, 750 feet from the opening, passing that of the mineral water impregnated with sulphuretted hydrogen on the right. The works extend under ground 4000 feet; immense, indeed, and extensive are the excavations. Beyond the Great Reservoir is a wheel, thirty-six feet in diameter, which raises the saline water from the wells; and, still further, are a variety of transverse and intersecting galleries. There is also an air

gallery, to ventilate the mine. The various wells were sunk, one in 1741, two in 1747, and one in 1781, in an argillaceous rock, having much the appearance of decomposed schistus. The strata decline at an angle of 40° to 45° , and their general direction runs from N. E. to S. W. From the horizontal gallery we ascend to the great wheel by 800 steps. One of the wells is 600 feet deep; and fifty ladders form the descent to the well called Bouillet. These Salines furnish 15,000 quintals of salt annually, and the salt supplies about one-tenth of the entire consumption of the Canton of Berne, the rest being obtained from Savoy and France. By the account of M. STRUVE *, it seems that the *Salines* decrease in their supply. The sources of the Bon Succès furnished in 1795, 18,045 quintals of salt; and in 1802, 13,800 quintals. The Salines are 886 feet higher than Bex, and 2214 feet above the level of the sea. In 1684, they passed from the ancient family of THORMANN into the hands of the republic of Berne. CHARPENTIER has found *iodine* in the mother waters of the Brine, and BAUP has detected the presence of *potassa*.

The water, originally weak, is raised by a great wheel from the Reservoir, supplied by

* Description abrégée des Salines à Lausanne, 1804, p. 57.

subterranean pipes from the mine, and falling through scaffolding supporting a platform of brushwood, part of the water, by the process of evaporation, meanwhile diffuses into the atmosphere, and leaves the remainder less capable of dissolving the most insoluble salt. The *sulphate of lime* is, therefore, in the filtration of the water through the brushwood, deposited as a crust on the twigs; and thus the water which falls into the tank beneath is less impregnated with sulphate of lime, and more with muriate of soda, or common salt, which is eminently soluble: this process, frequently repeated, highly increases the density of the *Eau Salée*. The entire phenomena afford a beautiful illustration of what may be called a chemico-mechanical process. From this tank the water is conveyed to the boiler by subterranean pipes. The temperature of the water at this spot issuing from the upright pump was $58^{\circ} 5$, and the air 45° , though, near the great wheel, it sunk to 42° . The weakest *Eau Salée* here contained *sulphate of lime*, *sulphate of soda*, and *muriates of soda and magnesia*. The *sulphate of lime* considerably exceeded the muriates in quantity. Air at the entrance of the Grand Gallery of the mine $63^{\circ} 5'$; farther in it rose to 69° . In other places the temperatures were 59° , 61° , and 66° ; that of the saline spring in the mine was $51^{\circ} 5$. By chemical

tests, I found that the strongest Eau Salée here contained more of the *muriates* and less of the *sulphates*. We were told that the air within varied at different times, and that from 10° to 15° R. (from 55° to 66° F.) were the usual limits of range. An immense space had been recently excavated to be converted into a salt magazine. I detached from the wall a large specimen of *muriacite*. We were afterwards conducted through a long gallery, between walls of gypsum, by rather a steep staircase, to the main reservoir containing the water. It is 320 feet in circumference. We walked round it, and finally inspected the metre of discharge, where a float attached to a lever moves an index, which registers the amount of flow. The workmen receive ten batzen per diem (1s. 3d.) The temperature of the fountains in this district gave me 52°. A very beautiful weeping and graceful willow overhangs one of the fountains.

On our return from the Salines, we came up with an old woman, who might be termed the ancient sybil of the place, and whose appearance and manners in the olden time would certainly have procured for her the epithet of "witch." She had been gathering herbs, and while she carried a staff in one hand, the other held a *stramonium* plucked up by the root. She was shrewd and "knowing" in her remarks, but all

our questions gained nothing but evasive answers. We returned by the side of a hill: beneath us the plain seemed very rich, was laid out in parallel patches, and winded through a fine meadow and park. At Bex many workmen were employed in raising the pavement, which seemed once to have been a cemetery adjoining the church; they turned up human bones in great quantities, and raised them up in ridges. Goitre begins here to be common, on the side of the Canton de Vaud. A druggist informed me, that the only remedy adopted at Bex for its extirpation was the *hydriodate of potassa* and lard, applied externally by friction to the tumour, and that it had been entirely effectual. The temperature of two fountains at Bex was 53°; over one of these was a fine weeping willow.

Soon after leaving Bex, at six o'clock A. M., we observed on the left a fine garden, with a fountain playing in the centre: and two beautiful herons, one on each side of the marble basin, formed a scene at once graceful and picturesque. On our way to Lausanne we passed through Villeneuve, but as there did not seem any thing of peculiar interest in the town, we immediately went forward to Chillon; the charm of the mystic mistletoe, however, does not seem to be forgotten here any more than at St Mau-

rice. We revisited the walls and dungeons of Chillon, entering the fortress over the draw-bridge; the air without in the shade was $72^{\circ}.5$; that of the surface water of the lake $64^{\circ}.5$, and the atmosphere of the dungeon $62^{\circ}.5$, being 10° lower than the air without; and I therefore infer, that the temperature for the year must be here sustained at a more uniform rate, and be less subject to vicissitudes, than the external climate, and that, though this be less than the air without in summer, it must, *cæteris paribus*, be higher in winter, being so sustained by the more uniform temperature of the waters of the lake, in which the dungeon rock is so deeply imbedded.

Advancing towards Vevey, we observed people in the fields busily employed in topping the shoots of the Indian corn. In this part of the country, the houses have projecting roofs, which serve not only as shade and shelter, but become subservient to the protection of the crops; and we noticed flax, Indian corn, &c. thus preserved from wet. During a few hours stay at Vevey, I consulted the *limnimetre*. There is a distinct line pointing out its level in 1817, thus registered, “62. pouces de cette ligne;” the rise therefore was considerable. The limnimetre indicated $100.1\frac{1}{2}$. The level of the lake was now sinking; it had been two feet higher in the

preceding year than its maximum altitude in this.

On our return to Lausanne, we visited Gibbon's Library, and among the books found several editions of the *Bible*, Latin and English. This was a volume we least expected to meet with ; and could it have told the secret history of its once inquisitorial possessor, what a tale would have been unfolded ! I accidentally met with my old friend here, Senor CARLO DI GIMBERNAT, with whom, when *chargé d'affaires* for the King of Bavaria at the Court of Naples, in 1818, I had made many an interesting geological excursion. I know no one more devoted to the cause and interest of science ; he has made numerous interesting experiments in the Crater of Vesuvius, and visited it not far short of fifty times. He remained forty days, during the period of the equinoxes, watching the phenomena of the intermitting or reciprocating spring at the *Villa Pliniana*, on the Lake of Como, and an entire winter among the snows and glaciers of Chamouni. He had recently been making experiments on a peculiar substance he found in the thermal and sulphureted waters of Yverdun, which he had previously discovered on the surface of the Monte Epopeo, in the island of Ischia, in the Gulf of Naples, which has been described in a communication transmitted to the Linnean

Society through me. While our friends went forward to Geneva by the packet, we remained to enjoy the interesting conversation and company of my old friend, and on the Saturday morning rejoined them, but only to take our leave, as they were going through France, and we purposed to visit the north of Switzerland.

At Geneva we found every thing in complete confusion and uproar; and it was with the utmost difficulty we could procure accommodation at the *Hôtel de la Balance*. All this bustle was owing to a sham fight, or *fête d'eau*, which was to take place on the following day, SUNDAY, on the lake. In conformity with this, it was ordered that the public worship at the several churches should COMMENCE AT SEVEN AND NINE O'CLOCK A. M., AND FINISH AT A QUARTER PAST TEN, so that no interruption should be given to this trumpery raree show, for it was literally nothing better. So much for the religion of the church of Geneva. Let those who vindicate her creed tell us whether the statutes and ordinances of Heaven are to be subordinated to any secularity whatever. This appeal is not made to the infidel, "who cares for none of these things," but to the individual who professes a belief in christianity, and considers the command of Jehovah *paramount*. Such an individual must find himself in a dilemma, so long as it is written in

the statute book of Heaven, "Remember the Sabbath day to keep it holy,"—a command, *we think*, just as sacred, inviolable, and imperative, as "Thou shalt do no murder:" *both* were engraved on the same tables of stone by the finger of God.

We were told that the churches had been nearly deserted on this memorable morning; such are the practical effects of the *morale* of the ethics taught at Geneva. In this *fête d'eau*, the boats were dressed out in all their frippery and finery. We saw them late on the Saturday evening, and the entire exhibition, we believe, would scarcely amount to a tolerably decent puppet-show; but we did not witness it, as M. MALAN'S church was opened at the usual hour. Dinner was prepared for 500 at an inn on the verge of the lake. The party included the *syndics* and the *conseil d'état*. In the evening there was to be an exhibition of fire-works, and at night we were disturbed and annoyed by a cavalcade and procession of the fellows who had figured in the boats during the day at the sham fights, in the dress of Turks and Algerines, with cutlasses and carabines, some dirty and drunk, marching through the city with torches and kettledrums. These celebrated amusements have regular periodic returns. Thus much for the *solemnities* of a Sunday at Geneva.

In the *Place du Molard*, labourers present

themselves for hire every *Sunday morning*. Some of them come from a great distance, even, we understood, occasionally eight to ten leagues. They bring with them their sickles and scythes, spades, pickaxes, and shovels. Here are certainly the "labourers standing idle in the market place," but where is "THE LORD OF THE VINEYARD?" "*Thou shalt do no manner of work,*" &c. seems, in Geneva, to belong to a *dead* language, or to be void of meaning altogether; for, generally, with exception perhaps of the short period of public worship, and sometimes even this is forgotten, "all manner of work" in watchmaking, jewellery, &c. goes on as usual. The wages of a day labourer during the harvest were about 1s. 2d. per day, besides a bottle of wine, and soup morning and evening.

From the Cathedral of St Pierre we enjoyed an extensive view. In the tower we saw the fine *silver* bell, the tone of which is indeed sweet and silvery. It is said to weigh 500 lb. The tongue is of iron, and is moved by a leathern strap. It sounds the alarm in cases of fire, but otherwise is not used. The suspension bridge is very fine, and worthy of a visit: it was erected in 1823. We observed in our perambulations the house from the projecting window of which CALVIN addressed the populace, and altogether it recalled to our minds the house of JOHN KNOX,

in the Canongate of Edinburgh. In Geneva, however, we regret to say the name of CALVIN is almost *unknown* among the majority of its inhabitants. I asked a respectable looking person to tell me where I could find out the house where the celebrated CALVIN once lived: he was sorry, however, he said, to confess that he did not know whom I meant, for he had not heard the name of the *gentleman* before.

The ecclesiastical court of Geneva is managed somewhat like that of the Church of Scotland; and candidates for the ministry go through an almost similar course of study and examination. The title *proposan* applies to the individual when he enters the priesthood; but when he is set apart to the charge of a parish, he then assumes the epithet *pasteur*. The oldest pastor of the city takes the title *doyen*, and the president over the *weekly* convocation, or assembly of pasteurs, which meet, as in the *presbyteries* of the Church of Scotland, to regulate ecclesiastical affairs, is called, as in Scotland, *moderator*, though, in the latter, the presbytery is *monthly*.

CALVIN, the celebrated reformer, has rendered the name of Geneva dear to religion; and his "Institutes," though certainly not free from error, are hailed by the majority of protestants as the most happy compendium of the Doctrines of Christianity that was ever conceived by the

mind of man. The only standard of appeal, in this question, is the revealed record, and by this test they must stand or fall. Sophistry may disguise or pervert, but the mind, unbiassed by prejudice or preconceived opinion, is the only legitimate judge. It must be honest to itself, and docile in the things which belong to God, else it can have neither part nor lot in this matter. JOHN CALVIN was elected Professor of Theology in 1536, and founded the College in 1559, together with the Academy and Public Library, and died on 27th May 1564. His death, observes PICOT, Professor of History in the Academy of Geneva, occasioned a general mourning in the city. Every one believed that, in his loss, he had indeed lost a prop, protector, and father, and that even the future hope of the republic was eclipsed. All ranks and conditions accompanied his remains to their last repose, and by their tears testified that their grief was indeed sincere. He has been accused by the enemies of christianity as consenting to the death of SERVETUS, and some other acts of severity: nor do we by any means hold him guiltless in these respects; but, as PICOT justly observes, "these acts were attributable rather to excessive zeal in the cause of truth, than to a bad principle of action." In an age literally distinguished by "fiery trials," and one wherein

Protestants were frequently victims of Catholic persecution, CALVIN, 'by an unfortunate *lex talionis*, retaliated on SERVETUS, who, hardened in infidelity, denied the Divinity of CHRIST. This was a bold stroke, aimed at the foundation rock of Christianity; and CALVIN was roused in the cause of truth, and the Master whom he served. But he who could, in an unguarded moment, and in the agitation of mistaken zeal, proceed to such an extremity, would, we believe, had he been the victim sacrificed to truth, not only have been passive at the stake, but prayed for his enemies. Noble and praiseworthy institutions, and numerous monuments of good, attest in loud acclaim the excellence of his heart and the vigour of his understanding, and forbid us to plant an anomalous feature in his character. These form a bold bastion, firmer than Geneva's walls, against the attacks and assaults of his enemies, and form

——— "A tower of strength,
Which they upon the adverse faction want."

Aye! and when his enemies are reduced to the dust of death, and the waves of oblivion have rolled over their names, that of JOHN CALVIN will be found to enjoy the imperishable laurels with which the genius of christianity has already crowned his bust. In him we behold an honest

man, nobly contending for what he believed to be the "Faith once delivered to the Saints."

We returned to Lausanne by the steam-packet on Monday, and left for Neufchatel on Tuesday morning. On our route, we passed through Yverdun, celebrated for its warm-baths, which are tolerably well frequented during summer. They contain *sulphureted hydrogen* and the *muriate* and *sulphate of soda*. The temperature at the bottom of the lake at Yverdun, which is in some parts 450 feet deep, SAUSSURE found to be 41° Fahr. when that of the surface was 74° Fahr. Both the cormorant and the pelican sometimes take their station by the edge of the Lake. The wines at Yverdun are both white and red, but corn is more cultivated in this district than vines, as the seasons are not always sufficiently warm for their maturation; and the culture of corn seems gradually usurping the lands pre-occupied by the vineyards. The potato is extensively cultivated for the purpose of the distillation of brandy, and recent experiments, notwithstanding COBBETT's tirade, and his Indian corn manœuvre, seem more and more to enhance the worth of this truly valuable esculent. It is one of the most wholesome cultivated roots, and we consider it the very mainspring which contributes to the health of the British Empire: this root, too, yields excellent starch, is the basis of *British gum*, and

constitutes the greater part of what is sold as Indian arrow root. The stalks, when burnt, yield an excellent alkali for bleaching and washing, and not only is a spirit extracted from its blossom, but it contributes to the arts, by supplying a fine yellow dye. We understood distillation from the potato was generally extending.

The lower part of St Cierges, not far from Yverdun, produces much corn, and extensive crops of tobacco. The neighbourhood is marshy, and intermittents used to be frequent, but lately many of these swamps have been drained and cultivated. Febrile affections have almost entirely disappeared. Yverdun enjoyed much reputation and celebrity, as being the residence of the teacher PESTALOZZI. We learned from a well informed individual, who seemed to be intimately acquainted with all the circumstances, that though he still maintains his chateau there, he lives * with his grandson at Argovie. He had been most illiberally treated, and bitterly persecuted by the inhabitants of the town of Yverdun. For a trifling debt of about L. 25, his entire furniture was seized, and it does not appear that Yverdun possessed one individual sufficiently generous to come forward on his behalf. His Memoirs were then in a state of forward-

* This distinguished individual is since dead.

ness for publication, by a Mr SMITH, whom PESTALOZZI used to call his "bras droit." Mr S. has clearly proved, that, by the institute of PESTALOZZI, Yverdun gained an additional revenue of not less than 150,000 francs annually, arising from the influx of strangers. This institute certainly enjoyed considerable reputation, which is attested by the fact, that, in 1818, the establishment contained 150 scholars from many nations, prosecuting their several studies under various masters and ushers. A great many of these were Germans. By the insane and unrelenting persecution he received from the inhabitants at Yverdun, this celebrated man was forced to leave his home: the institution was broken up, and the people now, for their own sakes, bitterly repent their cruelty and oppression of an individual, who had so extensively benefited their town, and was its glory and its boast; so true it is that man is blind to his best interests, and talent and worth are often sacrificed to wanton malignity. PESTALOZZI has been accused by his enemies of favouring infidel sentiments; a charge which has been warmly repelled by his adherents.

We now took leave of the Canton de Vaud, where every Swiss is a soldier from his birth, and entered that of Neufchatel, arriving at its capital at 7 o'clock P. M., at the Hôtel de la Balance.

During our stay we visited the Hospital of Pourtalés, where four *Sœurs de la Charité*, and a superior, take charge of the building and its inmates, under the superintendence of a medical gentleman. There is a neat laboratory where medicines are prepared, chiefly *simples*; the arrangement was good. Among the few books, I noticed "Le Botaniste Cultivateur," &c. There was a variety of beautiful mortars of porphyry, serpentine, and the variety called potstone. In this laboratory, I noticed also two large snail shells, with a wicket of gauze over the opening, as a kind of *operculum*, and in each was imprisoned a minute figure, extremely neat, and habited like a nun. They were on a side shelf, and accidentally placed there, but I was amused with the fancy so very characteristic of the fate of these self imolated victims of superstition. There were thirty-three patients in the hospital. In the consultation room was a fine portrait of Count POURTALES, a citizen of Neufchatel, and the benevolent founder of the edifice. On the 14th January 1808, POURTALES assigned 600,000 francs toward the construction and maintenance of this Hospice, and it was opened in 1811, for the reception of all poor patients, without distinction of country or religion: the number of beds amounted to near forty. POURTALES, we were informed by an individual,

whose relation was employed in his office, was a man of eccentric habits and industry. His clerks were unceremoniously and promptly dismissed, if they neglected to use their pens to the *last stump*, or lost carelessly a slip of paper, or bit of pack-thread. From the hospital we went to the garden of the late Count, but found nothing attractive in it. The moss house was fine, and the only thing which we admired. There was an adjoining study : a convex mirror was imbedded in the moss, and an alabaster lamp suspended from above : the view from hence is very extensive.

The Hôtel de Ville is a fine massive building, and its rooms appeared handsome. The only paintings we noticed, were those of the present King of Prussia, and of his father, the Elector, &c. Near the Hôtel de Ville is the orphan Hospital. To PURY and POURTALES, both citizens, Neufchatel is chiefly indebted for her various benevolent institutions. We visited the Cathedral, which, however, disclosed little that was interesting or worthy of particular note. The fountains are of ancient architecture. We found considerable improvements going on in buildings : new pavements were being laid, and stone pipes for the supply of water. Neufchatel is built on two hills, separated by the Seyon, and contains about 4500 inhabitants.

A fine promenade, planted with trees, has been recovered from the lake; and from the *crêt* above this promenade, the town is seen to much advantage. The lake was transparent as crystal, and we saw a fine shoal of large salmon trout, of which we distinctly counted nineteen. We were informed that a salmon had been caught the preceding day, of the extraordinary weight of eighty-five pounds, and that the *moræna*, a kind of spotted eel, was occasionally got five feet long. During our stay, however, we had only a large pike served up at the table d'hôte. The price of butcher meat in the market here, as well as butter, was similar to that at Lausanne, or a shade higher in the former; but the batzen in this Canton are a fraction less in value than in other Cantons, twenty-one batzen here being equal to twenty elsewhere. Both red and white wines are made in this Canton, and the vine is cultivated at from 400 to 500 feet above the level of the Lake. The vineyards are enclosed here as at Lausanne, being flanked with high walls by the road side, which becomes excessively annoying in the summer from heat and dust, the former doubled by reflection, and unrelieved by the breeze around, and the latter accumulating, from not being swept away by the circulation of air. We were informed that a vineyard had that season been destroyed

by hailstones, at about six miles distant, being without hail protectors, whereas the neighbouring vineyard, supplied with paragrêles, escaped untouched. In the neighbourhood of Neufchatel, open sheds may be seen filled with rounded cakes, somewhat resembling turf placed to dry. These are formed of the refuse of the grape after expression, which are thrown up into a heap. An iron hoop or ring, about a foot in diameter, and two inches deep, is filled with this semidecomposed refuse of grapes and vine stalks, and hard compressed, being trampled by bare-footed boys, having hold of a transverse bar. After this simple operation, when cast out of the mould, they are transferred to shelves to be dried: and may then be used as a material for fire, or form good manure; and the burnt ashes yield an excellent alkali. During our stay, we walked to the beautiful bridge cast over the river *Doubs*, and visited, at no great distance up the river, a large paper manufactory. In the crevices of the wall we passed on leaving Neufchatel, we noticed the wallflower and greater snapdragon.

Neufchatel formed a principality, to which, after having been vacant in 1707, by the death of the Duchess of Nemours, FREDERICK I. King of Prussia, in quality of hereditary Prince of Orange, tendered his claims, and was accepted. Since that period it has remained in his posses-

sion, but though nominally Sovereign or Prince of Neufchatel, the inhabitants seem to enjoy extraordinary immunities and privileges. From the produce of the vineyards, the sovereign receives a tenth as a tax. While the cultivation of the potato seems to increase, that of grain appears to diminish. Corn pays one-tenth of a tythe, but potatoes are exempt from every tax. The thread of the flax grown among the mountainous districts is so fine that cambric is made from it; but if we are not mistaken, the fibre of flax grown on dry mountain patches, though finer, is not so cohesive as that grown in damp ground, and lower levels: nor do I doubt but the seed likewise varies; that grown in some parts of Italy called *Lino monochino*, always fetches a high price, and I was told it came originally from Bavaria. The cheeses of the mountains and villages in this Canton are often, from their form and weight (forty to fifty pounds), confounded with those of *Gruyere*, in the adjoining Canton of Fribourg. In the principality of Neufchatel, the number of bee-hives is reckoned at 3838.

The trout of the Doubs tastes of cray-fish, on which they seem to feed, and two varieties of the latter are found in the waters of the Doubs and Seyon. The fishing of the Lake of Neufchatel is open to all without any restriction. The

Cyclamen europeum is found in great abundance; and among the rocks in the Canton, between St Blaise and Woens is seen the true *Lavender*, and above its level the *Bulb-bearing Lily*, *Rhododendron ferrugineum*, &c. On the borders of the Doubs the *Daphne alpina* flourishes, and above the Brenets, the *Fritillaria*.

The introduction of clock and watch making into this Canton, is an epoch of sufficient interest, and altogether curious. In 1679, one of the inhabitants brought a watch from London, the first that ever had been seen in these parts: from a slight accident it required repair, and was entrusted to a person of the name of DANIEL JEAN RICHARD, who having minutely studied its mechanism, endeavoured to imitate it, and though in want of every material and instrument, his inventive genius supplied the desiderata. An entire year, it appears, was employed in making the necessary tools, &c. and in six months afterwards he produced a watch complete in all its parts. For a long period he monopolized the manufacture, but the demand considerably increasing, he initiated some of his friends into the "craft and mystery" of watch-making, and was thus enabled to supply the demand. He retired to Locle, where he died in 1741, leaving behind him five sons, watchmak-

ers, and this is now the staple trade of the Canton.

From among the mountains in the Canton of Neufchatel have emanated many ingenious men. BERTHOUD, author of a treatise on watches, and his nephew, well known for his marine pendulums. BREGUET of Locle, late of Paris *, the celebrated inventor of that very curious, delicate and sensible instrument, the *Thermometre metalique*, (one of which I possess), and several ingenious improvements on the pendulum; also DROZ of Paris: and here, too, is to be found PERRLET, inventor of the self-winding watch, with others celebrated in chronometry. Living in insulated houses, the leisure hours left from agriculture, and the winter months, are devoted to clock-making. From the mountainous districts of the Canton and Val de Traves, 130,000 watches are annually exported; one-nineteenth are in gold, and the rest in silver or *semilor*, &c.; and about 1000 pendulums. The price of these watches varies from 7 francs to 600 francs. Among the pines of the Jura, in the houses of these mountain traffickers in pendulums and watches, may be heard dissertations on the peculiarities of national taste, and watches found for all nations, and suited to every fancy. Watches for America,

* Died some time ago.

France, Germany, Holland, Sweden, Russia, &c. watches enamelled and enriched with pearls for Italy and Spain, and large copper gilt watches, or of silver, with false shagreen cases, and dials with Turkish cyphers for Turkey. A child gains four or five sous per day (2d. or 2½d.), and good workmen ten to twelve francs, or even more. At Chaux de Fonds, are manufactured optical and other philosophical instruments. From this Canton a specimen of beautiful glass, well adapted for achromatic lenses, was lately sent to this country, by an individual, we believe, now no more. The report of the Committee appointed by the Board of Longitude, to investigate its claims to superiority, gave a high character of excellence to it. We have no means of knowing what has become of it, but Messrs HERSCHELL and FARRADAY have not long ago announced the production of a kind of glass, well fitted for telescopic purposes. The inhabitants of this Canton are extremely active, industrious, and intelligent. Their religion is Protestant. Instruction seems very general, and every facility is afforded to all classes by the public authorities. We left Neuchatel at 10 o'clock P. M., on the 24th, by the mail, and arrived at Berne on the morning of the 25th. It was a fine star-light night, and the planet Venus looked beautiful in her shroud of silvery light.

CHAPTER VIII.

BERNE — FELLENBERG AND HOFWYL — HINDLEBANK — THUN AND ITS LAKE — UNTERSEEN — LAUTERBRUNNEN, AND THE CASCADE OF STAUBACH — GRINDELWALD — THE GLACIERS.

WE much regretted that our time did not allow us to visit, on our route to Berne, the Isle of St Pierre, in the *Lac de Bienne*, once the favourite retreat of J. J. ROUSSEAU. Berne is an extraordinary city, and withal lively and interesting: its situation is elevated more than 100 feet above the bed of the river Aare, which encircles one half the town. On the whole, I am inclined to call Berne a fine city, the streets called *Grande Rue* and *Rue de la Justice*, are very beautiful. The houses, built of sandstone, are over arcades, which, of necessity, form a secure shelter for pedestrians, though it gives a dull and sombre aspect, and we exceedingly prefer seeing a promenade *bona fide* in the open air; the effect is much better, and more lively, and exhi-

larating. The only drawback we felt was the language, German being universally spoken, and we but imperfectly understood it. French is seldom heard: even the *Cicerone* mutters a sorry jargon, which is any thing but French; and when we hired a char-a-banc, the driver was mute to every note but German. The fountains are numerous, and in their architecture exceedingly grotesque; of course, their favourite, the *Bear*, has its place on them, as on every thing besides. They are found in almost every street, and discharge their waters with considerable force: they were established in 1394; the excessive heats of that year having dried up many of the fountains that were then in the city. The water which supplies them is brought from a considerable distance. Berne has four gates; the handsomest, composed of iron, is the *Porte de Morat*, by which we entered from Lausanne. In the centre is a basin of water, and on the left The "*Grand Hôpital*," one of the chief buildings in Berne. The population has been rated at 13,927. The streets are excellent, and regularly watered during summer, or in dry weather: criminals are employed as scavengers.

The walks in and about Berne are beautiful and varied, and from each one some pretty scene is presented. Among those in the city we much

admired one near the *Casino*, and another called *Le Petit Rampart*, which affords a fine view of the rich, fertile, and smiling meadows through which the Aare serpentines: that called *La Plateforme*, 108 feet above the river, with a fine avenue of shady trees, is the most fashionable resort, and is generally crowded; from it is a good view of the glaciers. From the higher parts of the town, we descended, by a flight of 187 steps, to the bed of the Aare; and, not far from the embankment, which intercepts its waters, and forms a fine fall, a stream is directed to supply corn and saw mills, and other machinery. The promenade along its banks is refreshing and cheering. There are also beyond the city-walls a walk, embowered by an avenue of limes, the *Philosophers' Walk*, that of *Altenberg*, and others. The *Eichplatz* and the *Enge* are noble stations for the survey of the rich and picturesque beauties of alpine landscape. The latter was also an especial favourite. It is a lovely walk, and the view is truly picturesque and beautiful;—that part especially of the Alpine Chain which includes the Jungfrau, is brought out in sublime *alto relievo*. On the side of a walk, constructed by the taste and patriotism of an individual, is a huge boulder of granite, bearing the following inscription:

Civibus et Peregrinis
 Gratium opus,
 Relictu veteri via
 Per loca prærupta
 Qua natura negare
 Videbatur
 Iter,
 Factum atque munitum.
 Inceptum MDCCL.
 Absolutum MDCCLVIII.

There are many public buildings, well worthy of notice, but as our intention is by no means to enter into minute detail, we may simply mention the *Great Hospital*, the *Public Library*, the *Museum of Natural History*, the *Orphan Hospital*, the *Arsenal*, and the *Hôtel de Ville*, as most worthy of note. We visited, among others, the *Munster* or Cathedral, a fine monument of Gothic architecture. The foundations were laid in 1421. Above the principal entrance the Last Judgment is carved in wood *en relief*. Painted windows ornament the choir. A sand-glass is still attached to the pulpit, and in the sacristy are shewn fine tapestries, and rich priests' garments, which are of the period of CHARLES the Rash. The tower contains the largest bell in Switzerland: it weighs 2030 lb. exclusive of the clapper. Bears and stags have commodious apartments in the fossés of the city: two sumptuous dens have lately been erected for the for-

mer, near the *Gate of Arberg*, and they certainly amuse strangers by their grotesque movements, in the ascent and descent of the trees, in the centre of their enclosures. Captured on the day that the foundation of the capital was laid, the bear has accordingly been embossed in the escutcheon of the city arms,—enters into all their chambers of imagery,—is struck on their coins,—sculptured on every bridge,—dangles over every inn,—and is carved on all the barns and granaries in the Canton.

We observed that lists of the names of strangers were regularly transmitted from Canton to Canton. The hotels called "*Faucon*" and "*Couronne*," are the most frequented by *English*, there being on the 21st August, twenty-two at the former, and fifteen others; and twenty-six at the latter, and seventeen others. That called the "*Gentils-hommes*," on this day had only two *English*, while there were twenty-five gentlemen from different countries. In Berne, French Protestant and Catholic worship are celebrated under the same roof, at different periods of the same days,—certainly liberal enough, though we doubt its propriety and decorum: a curtain conceals the insignia of the latter. Considerable external decorum obtains during the celebration of public worship, and chains are drawn across every street where the

service is being performed. It need scarcely be added, that, since the language spoken is German, smoking tobacco exists to a vast extent,—an almost invariable adjunct of that language.

The climate of the Canton of Berne is too cold for the vine, but rich pasturage and waving corn fields amply compensate for this want. The cottages and farm-houses, with the overhanging roofs and carved frame-work, all constructed of wood, are picturesque and pretty. The costume is extremely curious, peculiar, and characteristic, and must strike every stranger, as it assuredly did us, with no ordinary surprise.

During our stay at Berne, we engaged a *char-à-banc*, and set off to visit the magnificent and extensive establishment of M. FELLEBERG at Hofwyl, which combines varied and numerous branches of instruction, viz. an institution or seminary for the education of young gentlemen, of the superior classes of society; a school for the poor; a well arranged agricultural establishment, both theoretic, and to reduce to economical practice the discoveries of different countries, and to ascertain experimentally the value of the various improvements in agricultural machinery; also a manufactory for constructing the implements required.

On our arrival, we found that the greater

part of the pupils had set out on their annual pedestrian excursion, *via* Neufchatél, under the care of one of the classical tutors. We were informed that there were then ninety-nine élèves: of these fifteen were English, ten Scotch, including two sons of the eccentric Mr OWEN, who had twice visited Hofwyl, two Russians, fifteen Italians, one Greek, several Danes, Swedes, and Germans; the rest French and Swiss; there were *of course no Spaniards*. Twenty-one masters teach the languages, belles lettres, arithmetic, natural philosophy, chemistry, botany, agriculture, &c. There are five professors for the various accomplishments, as music, drawing, &c. In the saloon for music, there were two kettle-drums, a violincello, a grand piano-forte, and various other instruments; and on a large black board, were chalked lines and notes for the use of beginners: a concert is held every month. The various apartments for instruction are arranged with judgment and method; in fact, nothing can well be imagined more complete than the *toute ensemble* of this very extraordinary establishment. There is a chapel that serves at once for the Protestant and Catholic worship: for the former, the altar and imagery of Catholicism are most judiciously concealed from view, being closed in by folding-doors.

The beds where the pupils repose, are ele-

gantly neat, and all subordinated to health and comfort; each has a separate compartment, and in some we were pleased to observe the pictures of their parents or friends. In the dining-room is a closet, which descends into the kitchen by means of machinery, and is wound up again, loaded with the dishes. The arrangements in the kitchen seemed admirable, and very complete, even in that for the working-people was a Papin's digester. Proper houses and rooms are appropriated for tailors, shoemakers, carpenters, mechanics, &c., and we found all at their respective labours: every thing required for the establishment is done, as much as possible, within the precincts. A large building is appropriated to horsemanship and various gymnastic exercises; and for the latter there are also erections of wood, &c. without. There is a plot of ground allowed to each pupil for a garden, in which he may exercise his own taste. Several new edifices were being erected, for various purposes, and M. FELLEBERG superintended them in person. The number of educated poor amounted to thirty, chiefly orphans, they are maintained, clothed, and educated gratuitously, and, in return, their services are claimed by him until they are of age.

The agricultural implements are numerous, varied, and complete, including all the ingenuity

of the most recent invention. There is a fine dairy: the milk is preserved in shallow trays of wood in subterranean cellars, and the floors are frequently sprinkled with water to keep them cool. A good deal of common cheese is made. There are fifty milch cows, which are regularly curried down, and attended to like horses; fourteen horses; fourteen oxen for labour, particularly large, of the Fribourg breed. Liquid manure is duly appreciated, and holds its proper place in the economy of agriculture, which is not merely theoretic, but practical, and that, too, on a magnificent scale: Both horses and oxen are almost entirely fed at the stall: green provender is cut for them in the proper season.

FELLENBERG must, from his princely domains, be possessed of vast pecuniary resources, and their appropriation seems commendable. Altogether the science, of education, in its various ramifications, appears to be conducted with rare ingenuity and talent. The whole machinery is as extensive as it is noble, and every wheel seems to move with perfect order and regularity. FELLENBERG is certainly a lofty character. He has been accused, as well as PESTALOZZI, of favouring infidel sentiments, with what shew of reason, I cannot tell. The forms, both Catholic and Protestant, are, at any rate, observed,

and we did not hear that his private sentiments, if they are infidel, had ever been obtruded.

On the whole, we cannot but cheerfully repeat the complimentary tribute awarded by M. CRUD*, "Tout y est, et y est à sa place."

Doubtless it was at Hofwyl that OWEN imbibed the principles of his wild and visionary scheme,—his parallelogramic plan of society, which he is now endeavouring to transplant in the wilds of America; and when Mr OWEN can *recreate* the human heart, and remodel its principle of action, then he may succeed,—but not not till then. The whole proceeds on a false estimate of human nature, and both observation and experience give the lie to his assumption.

From Hofwyl we proceeded to the *Chateau* of Count D'ERLACH, at Hindlebank, and enjoyed a walk through his garden and domains, which are delightfully situated; but we regretted that the Count had unfortunately just left home for the *Chateau de Berg*, near Zurich. From this chateau we proceeded to the village of Hindlebank, with especial reference to the extraordinary monument in the church there,—the work of the sculptor NAHL of Cassel, formerly sculptor to his Majesty the KING of PRUSSIA. It represents the moment when Madame

* Notice sur les Etablissements de Hofwyl, 1816, p. 6.

LANGHANS, the wife of the Pastor of Hindlebank, springs from the tomb, with her infant in her arm, the sepulchral stone being fractured by the trump of the Archangel, at the summons to Judgment. It is a wonderful production, and, we think, exceeded by none of the works of ROUBILLIAC. Madame LANGHANS was considered one of the most beautiful women of Switzerland, and died at the age of twenty-eight years. NAHL, who was then engaged in executing a monument for one of the family of ERLACH, abode with the Pastor, and employed his chisel in this new direction. The figures and the tomb are sculptured out of *one entire* block of sandstone. The tomb seems to have been rent suddenly asunder, and fractured into three pieces, and the fragments to have yielded and opened; while from its bosom a beautiful figure, with her infant, is about to dart to Heaven; the fracture is so extremely natural and striking, that the astonished spectator can scarcely believe it is merely the triumph of sculpture. The monument is a little lower than the floor of the church, and a trap-door opening on its hinges, exposes it to view. In this church there is also a fine monument raised to several members of the Count d'ERLACH's family. One seems to have attained

to an unusual age. The following is the inscription :

Alb. FRED. S. R. J. C. ab ERLACK Dominus

Nat. Kal. Nov. 1696 Concess. Fato.

1788. Explet ann. 93, &c.

We returned to Berne in the evening, through a charming, fertile, and highly cultivated country.

We left Berne for Thun, at nine o'clock on Saturday, with a German postilion, by a fine road, the land cultivated, and adorned with picturesque cottages, &c., and arrived at Thun about noon, but remained only a short time at the inn (Freyhof): it was a fair day, and numerous wares were displayed. We ascended by a flight of steps sufficiently shallow, to the cemetery of the church, which stands on an eminence, and overlooks the town, and enjoyed a noble view of the ridge of the *Blumenalp*: the *Jungfrau*, *Stackhorn*, &c. The view of the plain to the right, and the lake, enrich the picture. About two o'clock we set out on the lake, the boat was charged 7 francs. On leaving Thun, the view becomes extremely interesting, and several pretty scenes on both sides present their various aspects. The appearance then changes to the towering, the wild, and the rocky. We landed at the further extremity of the

lake, after a most delightful excursion, for the day was fine and serene, and the waters were placid as a mirror. Having engaged a person to take our luggage, we chose to walk to Unterseen, a distance of only about two miles, as the individuals seemed eager to impose.

We remained during our stay at the *Hôtel de la Douane*, the landlady of which was the once far-famed *Belle Batelliere*, now thirty-three years old, and has several children : she is still beautiful, and must, at one time, have been lovely. From hence the Jungfrau forms a magnificent and sublime spectacle. The villagers seemed happy and cheerful; the aquatic scenes by which we were surrounded, enlivened every aspect with a vesture of the romantic and picturesque. The view by moonlight from the bridge over the connecting stream, which unites the lake of Thun with that of Brientz, was calm and placid, and peopled with novel images and figures. This village is a very singular one : the houses are built entirely of wood, remarkable and exotic in their construction, and curious in arabesque or fantastic ornaments, and carved inscriptions in German, indicating by whom they were constructed, and invoking God for his blessing and protection ; and the dates seem to claim for some of the houses a high antiquity. It seems to be a village, as it were, half afloat

on a running stream, which presents some fine islands on the side of the lake of Brientz. Here and there the water exhibits pretty little falls, or is heard murmuring and gurgling round flood-gates, and piles, supporting buildings, variously occupied with saw and corn mills, and other machinery, impelled by the moving current. I like Unterseen for its calm and settled quiet, and I like its people, who really seem fraught with much Arcadian simplicity, and appear also well-doing and industrious, moral and religious. The meadows are sprinkled with a profusion of autumnal crocus', and fine walnuts form avenues around. It was truly rural to witness, toward the evening, the regular return of a flock of goats from the mountains, at a stated period. They were supplied with bells, and were generally preceded by a captain, who headed the troop, and led the van; they were unaccompanied by any person, and so soon as they arrived at the corner of an inn, the cavalcade, which had marched with extraordinary regularity, broke up, and each went his several way to his own home. The Sunday we passed here was alternately wet, and chequered with gleams of sunshine. From our window we beheld the sublime spectacle of a rainbow in all its glory, with part of its arch depressed among the snows of the Jungfrau (the mountain of the Virgin.)

The Chanteuses at Unterseen are ANNA BAILLI, MARGUERITTE MICHEL, ELIZABETH MICHEL, and MARGUERITTE FUCHS. I spoke to two of them in French and Italian, but they understood me not, and I was not conversant with German. Here a person calls the hours each night, in summer at ten P. M. and two A. M., and in winter at nine P. M. and four A. M. His notes and announcement are musical enough. The interpretation is, "Gentlemen, I wish you good night, the clock has struck ten," or "Gentlemen, the clock has struck four, I wish you good morning." We took a walk to Interlacken, where once was an abbey, now in ruin. Here is a fine avenue of walnuts, forming quite a *Vall-ombrosa*.

We had been advised by our *host* either to go by the Scheidegg *via* Meyringen, or by the *Grimsel*, skirting the glacier of the Rhone, *St Gothard*, *Pont de Diable*, and through Uri's rocky world to Altorf, and had in due conformity provided guides, and mules; and with this intention, we left on Monday morning at five o'clock. We crossed several meadows, and afterwards passed, on the right, the ruins of the ancient Castle of Unspunnen, in the vicinity of which pastoral fêtes were celebrated in the years 1805 and 1808. On entering the bosom of the mountain, we observed a tablet, containing an inscription, deep

sunk in the rock, recording the death of two brothers, who fought in this defile, and were both killed. At a cross point, on entering the valley of Lauterbrunnen, we came to the junction of two branches of the *Lutchinen*, here called *Zweylutchinen*, or the *Two Lutchines*. One branch, the White Lutchinen (*Weiss Lutchinen*), flows from the valley of Lauterbrunnenn; while the other, the Black Lutehinen (*Schwartz Lutchinen*), has its source in the glaciers of Grindelwald; their united streams flow into the Lake of Brientz. The name Lauterbrunnenn signifies all *springs* or *fountains*, from the great number of springs which abound in it, and form no less than thirty rivulets. On the left we perceived a considerable deposition of calcareous matter, from the water of a spring. The mountains, of slaty schistus, appear to be singularly contorted. Numerous challets and clumps of trees, with some patches of birch, adorn the green pastures on the left. We were much disappointed in the *Staubach* (literally stream or cascade of powder): it falls from the summit of the rock called *Pletchberg*, from a height of 930 perpendicular feet, but the quantity of water was then exceedingly small: it is reduced into vapour, and seems almost converted into snow—an appearance produced, it is probable, from its state of minute division.

We did not pursue our route farther up the valley to see the cascade called *Schmadribach*. Toward the left of the Jungfrau (12,856 feet high) rose the *Monk* (12,663 feet), a mountain abounding with chamois, and which the hunters, though frightfully precipitous, often scale in the chace. Pretty models of Bernese cottages and dairies are sold in this valley, and we observed that the *silicious epidermis* of the *Hippuris vulgaris* was generally used as a substitute for sand-paper in polishing the surface of the wood. We did not stop at the inn here, but retraced our route to the road leading off, on the right hand, toward Grindelwald, at the *Zweyhutchinen*. On our way thither we found that part of the road was under repair, by felons, superintended by a guard. In Grindelwald the inhabitants seem industrious; and the state of the arable land and pasturage proves that they enjoy that comfort which such industry must secure for its possessor. Here is made a great quantity of *Kirschenwasser*, a kind of brandy made generally from cultivated cherries, but here from the *gean*, or wild cherry. The fruit, together with the stones, is bruised in stone troughs by wooden mallets; and this, when fermented, is submitted to subsequent distillation. When new, this species of cherry-brandy is dangerous, but it is mel-
lowed by age. The hydrocyanic, or prussic

acid, which comes from the kernal, necessarily renders it dangerous, this being one of the most violent and powerful vegetable poisons; and, as it decomposes by time, it is probable that it is rendered less pernicious from some such change. Here may be had the *Eau de vie d' Absinthe*, which the mountaineer will find a tolerable counterforte against the cold blasts to which he may be exposed; it is kirchenwasser, with the addition of wormwood in the fermenting vat.

While dinner was being prepared at the inn, we sallied out, and directed our walk to the Lower Glacier (Glacier inferieur), where is a seat prepared for the stranger; but we descended into the bed of the glacier, to view more nearly the magnificent façade and vault of ice, and a vast iceberg it was. Here we may literally touch the ice with one hand, and gather violets and strawberries with the other. I found the temperature of the air 65°, and that of the water issuing from below the glacier 31°, never having met with water, under such circumstances, at so reduced a temperature. It was on the Mer de Glace of this glacier that a French Protestant minister of the Canton de Vaud lost his life, on the 21st August 1821, respecting which we learned the following particulars.

He was accompanied by two guides, and seemed much interested, and looked down many

of the chasms. Into one which appeared more formidable than the rest he wished to throw a stone, to ascertain, if possible, the depth, and sent a guide in search of one; but, during his absence, in stooping forward, he lost his balance and fell to the bottom. The guides called loudly to him, but receiving no answer, they agreed, one to remain at the spot, and the other to hasten to Grindelwald for ropes and proper assistance. Two hours necessarily elapsed before he could return, and the night drew on. They, however, came with torches, and lowered one, but could not discover the body. An English gentleman, who had accompanied the party, offered a considerable reward to any guide who would venture into the chasm. At last one of the most courageous was prevailed upon, and was let down by ropes; but his search was useless. He descended a second time, still without success; but undaunted, he resolved to try again, and after remaining some time, found the body in the most remote corner; he adjusted the ropes, and the lifeless corpse was drawn up. .

On the guide being questioned as to the appearance of the place, he represented it as a grand and spacious hall, of immense size, with a finely vaulted roof, but *not cold*.

The vault of this great mountain of ice was of the most sublime character, and possessed a fine

aquamarine tint. The view from the seat is certainly of a most singular description. The pyramidal form of the insulated *aiguilles* among the glaciers is here very imposing; and their vast size and multiplicity give the scene wonderful effect. One of the *aiguilles* was *singularly perforated like a needle*. In the romantic valley of Dovedale, in Derbyshire, the limestone rocks assume very much the form of these pyramids of ice, and I remember to have seen one perforated. It rained a little, and we were informed that a small avalanche had fallen in the forenoon of the day from the *Mettenberg*, a little to the left of *Schreckhorn*, and in the fore ground.

Grindelwald is 3507 feet above the sea's level. On the right is the *Grand Eiger*, 12,216 feet high; and on the left the *Wetterhorn*, 11,445 feet high. Between these two mountains stands the *Schreckhorn*, 12,613 feet in altitude. Between the *Grand Eiger* and the *Schreckhorn* reposes the *Lower Glacier*; and between this central mountain and *Wetterhorn* lies the *Superior Glacier* (*Glacier superieur*.)

When we returned to the inn, we made inquiries about the passage of the St Gothard *via* the Grimsel, and were informed that it would be dangerous to attempt that route, as the weather was unfavourable, and it was utterly impassable during fogs and rain. We therefore deemed

it most prudent to return to Unterseen, and, after navigating the lake of Brientz, to pass the Brünig, into the Canton of Underwalden.

Among all the wonders of Alpine regions, the most wonderful and awful phenomena are those of the *avalanche* and *glacier*. Destructive, indeed, and terrible are the effects of the fall of an avalanche. Detached from its elevated station, where it may have been consolidated and hardened, and rested for ages, it sweeps before it in one whirlwind of fury, rocks, villages and pasturages, with the shepherds and their flocks, moving with accelerated velocity into the plain, and after emitting flashes of fire from the friction of fragments of rock (which was the case in the fall of the Glacier of Weisshorn), overspreads the verdant and smiling plain, with the livery of death and desolation. In 1501, an avalanche swept away an entire company of Swiss soldiers, not far distant from St Bernard, and in 1591, so many avalanches fell into the Rhone, that the river overflowed its banks, and carried away more than 100 houses, and drowned sixty persons, and 400 heads of cattle; and in 1720, one buried forty individuals in the district of Brieg. Sir ROBERT KER PORTER, in his travels in Georgia, &c. * has well described the fall of an

* London, 2 vols. 4to 1821.

avalanche from among the lofty heights of the Caucassian range. “ As the avalanche rushed, huge masses of rock rifted from the mountain side were driven before it: and the snows and ice of centuries pouring down in immense shattered forms and rending heaps, fell like the fall of an earthquake, covering from human eyes, villages, valleys, and people! What an awful moment, when all was still! when the dreadful cries of man and beast were heard no more! and the tremendous avalanche lay a vast motionless, white shroud on all around!”

Such dread visitations are frequent occurrences in Switzerland, and scarcely a year circumscribes its round, without the record of their devastation, the fall of mountains, the ruin of rocks, or the desolating effects of the debacle. The Cantons of Uri, Grisons and the Vallais are pre-eminent in these misfortunes, and it may be emphatically said of the inhabitants, “ their lives are in their hand.” The sombre forests of pines which fringe the escarpments of the Alps, or fill up the hollow acclivities on their sides, serve as abutments or buttresses to check the first impetuosity before it gathers strength, which it does in an accelerated ratio in its progression. These pine-trees seem planted by Providence, and, as it were, commissioned to say to the dread avalanche, “ Hitherto and no farther, and here

shall your force be stayed." It is beneath the wing, and under the shelter of these pines, that the challet of the shepherd is reared, and the Alpine village in the valley nestles most secure. To destroy such trees, their shield of safety, is made a *capital crime*, nor can we wonder at it, even in a country where happily the punishment of death is unknown. The Alpine traveller is subject to these falls of the avalanche, and it becomes him oftentimes to be very cautious in his progress, for the slightest noise, the crack of a whip, or even the human voice, might be sufficient to detach one. This increases the dangers of the Alpine chamois hunters, as the discharge of their carabines is more than sufficient to rouse it from its repose; and should such a circumstance be any where anticipated, their musket is fired off, to accelerate the fall, that they may afterwards pass without danger. Those who traverse the Alps ought to be aware of all these perils, and use the necessary precautions. Under particular circumstances, the guides enjoin it as imperative on the traveller, not only to walk softly, but on no account to speak. There are other dangers besides the avalanche; whirlwinds of snow may suffocate the Alpine wanderer, or, by blinding him, bewilder and perplex his path.

The Glaciers present difficulties and dangers

equally formidable to those who traverse them. The individual may be engulfed in some horrid chasm, by the rending glacier, which instantly yawns to receive him, or which is covered with a deceptive mantle of snow that conceals its danger, or the precipice may await him, should he escape the other perils so profusely scattered over the Alps of Switzerland. The rents in the Glaciers are announced by a crash like thunder, or a sound resembling the terrible discharge of artillery, and form a species of mountain barometer, the presage of change in Alpine weather. In all probability, the Glaciers are on the increase. There formerly existed a road from Grindelwald to Brieg in the Vallais, but it is now rendered impassable from their accumulation. There is also a natural basin of a somewhat conical form, toward the north of St Bernard, between *Mont Noir*, and the Glaciers of *Tseudey* and *Valpeline*; it has been ascertained to be 115 feet in depth, and according to SAUSSURE its contents are 84,000 cubic feet. In autumn the waters collect and fill the basin, and it freezes superficially. In the following July it thaws and forms a debacle which rushes into the Dranse. In certain seasons its basin has dried up, so that a descent to the bottom might be effected. In other years it has remained entirely frozen. There

has, however, been no torrent from it since 1813, and it is therefore conjectured that it is now resolved into a permanent glacier. The advance of the glaciers into the valley has already been cursorily remarked, and the probable cause glanced at; namely, the congelation of the water that enters by infiltration, and subsequent expansion in the act of freezing, which pushes forward the glacier toward the valley, where there exists no barrier to resist its advance, but rather an inclined plane which facilitates its march. This progress has been proved both in the Valley of Chamouni, in the *Glacier de Bois*, and in that of Grindelwald, in the case of the *Glacier Supérieur*.

In the former case, three pines being planted on a line with a rock opposite, in the Valley of Chamouni, it was thus proved that the glacier had advanced fourteen feet in the course of one year toward the plain. In the latter instance, pines of considerable thickness, remembered by many individuals, have been overthrown, and overwhelmed by the progress of the Superior Glacier of the Valley of Grindelwald. These Glaciers are the sources of mighty rivers, and from them arise the Rhone, the Rhine, the Tessin, the Arve, the Aar, &c., that roll their waters toward the ocean, through many lands, which they fertilize in their progress; or afford

the facilities of navigation to the commercial enterprize of nations. From the surface of the Ocean, these waters rise, by evaporation, and are again condensed on the mountain summit. Thus rivers may be said to return to their source, and move in a circle. "All the rivers run into the sea: yet the sea is not full: unto the place from whence the rivers come, thither they return again."

CHAPTER IX.

LAKE OF BRIENTZ—CASCADE OF GIESBACH—
CHANTEUSES—THE ALPINE HORN—THE PAS-
SAGE OF THE BRÜNIG—THE VALLEY OF SARNEN
—STANTZ—LAC DES QUATRE CANTONS—THE
THREE FOUNTAINS—TELL'S CHAPEL—SCHWITZ
—THE LAKE OF LOWERTZ.

WE left Unterseen, our favourite village, on Tuesday at six o'clock A. M. to traverse the Lake of Brientz. SEBASTIAN PIERRE, a guide from Lucerne, who had accompanied a party returning in this direction, wished to retrace his steps, and requested a place in the boat we had engaged. As we found him intelligent, and especially as he understood and spoke French as well as German, we immediately engaged him as our guide to pass the Brünig, from the Canton of Berne into that of Underwalden, and as far as Lucerne, whither we were proceeding. The morning was indeed fine, and the lake was calm, but the surrounding rocks were veiled in clouds. At 8 A. M.

the air was 69° Fahr., and the temperature of the waters of the lake 66°; SAUSSURE's hygrometer was 20° 5'. The water seemed particularly pure, being insensible to chemical reagents. We landed on the right, and ascended by a very steep path to the beautiful and truly picturesque waterfall of the *Giesbach*. A convenient seat is erected for the stranger, and from hence the cascade is seen to great advantage. A curious and fantastic rustic bridge is thrown over it at some height above, forming a kind of *basso relievo* in the woodland back ground. Having for some time contemplated the charming spectacle, we adjourned to the house, and were gratified by hearing the organist of Brientz, and his two daughters, chanteuses, and two sons, form a fine choral band. Without entering into musical technicalities, it may be stated that the singing was exquisite; whether light and airy, or soft and plaintive, there was excellence in all. Their voices were not only sweet in their native tone, but of a highly cultivated character, and, as far as we had the ability to judge, there were exhibited in the execution, feeling, taste, and judgment. Among the pretty airs, &c. we had the *Tyrolese song of Liberty*, the *Chanson de Giesbach*, and GOD SAVE THE KING. The words of this our national air were remarkably well pronounced, and the accompaniment of the youngest son on

the *pianoforte* was very well played, and with a good deal of execution, but unfortunately the instrument was out of tune. I proposed my favourite air, and the national one of Switzerland, the *Rang des Vaches*, one which powerfully affects the sympathy of all Helvetia's sons. It was delightfully sung, and can never be enjoyed to its full amount, except among its native Alps, and by those who have seen a flock of goats rush from the mountain steep, and heard their bells yield their running notes, and now a slower march, their bells in consonance, and then the changed intonation as they pass, rank and file, the rude *pont des chevres*, or as the battalion enters the village, and the sounds ramify on their dismissal. All this I can fancy I hear again, and the *Rang des Vaches* summons to my recollection this rural alpine picture, in all its life and colouring; and when I would realize its imagery, I have it repeated on a specimen of Geneva's ingenuity, yclept a musical box.

After this musical treat within doors, we heard the *Alpine horn* without. There was a wild romance in its notes, which was characteristic in a very high degree of all around. This instrument is about eight feet long, and its farther extremity rests on the ground. It is used among these mountains, not merely for the

herdsmen's call, but as an invocation for the solemnities of religion. As soon as the sun has shed his last ray on the snowy summit of the loftiest range, the Alpine shepherd, from some elevated point, trumpets forth "PRAISE GOD THE LORD," while the echoes in the caves of the everlasting hills, roused from their slumbers at the sacred name of GOD, repeat "PRAISE GOD THE LORD." Distant horns on lower plains now catch the watch-word, and distant mountains ring again with the solemn sound "PRAISE GOD THE LORD," and other echoes bounding from other rocks, reply "GOD THE LORD." A solemn pause succeeds; with uncovered head, and on the bended knee, the shepherd's prayer ascends on high. At the close of this evening sacrifice, offered in the temple not made with hands, the Alpine horn sounds long, and loud, and shrill, "good night," repeated by other horns; while a thousand "good nights" are reverberated around, and the curtain of Heaven closes on the shepherds and their flocks.

We landed at Brientz on the other side of the lake, and were extremely anxious to have heard the fine *chanteuses* here, but we were startled and terrified by the stentorian voice of an Englishman vociferating bad German, and issuing his pompous commands, in the true style and character of *milord Anglais* in the summons for

breakfast, and we were glad to escape from this scene of noise. Our ears had been before saluted with dulcet strains of harmony, and this was more than we could bear; therefore, hastened on toward Myringen. Before we reached the town, we paused at the noble cascade of *Reichenbach* on the right, which is a magnificent waterfall. From its highest elevation to the plain, there are altogether seven falls, but the lowest is the finest and most picturesque. The water rushes with vast and tumultuous fury into the chasm it has excavated for itself.

“Fervet, immensusque ruit profundo
Pindarus ore.”

There was an artist occupied in taking a sketch of this splendid cascade, and we must confess that the falls of this and of the Giesbach are, from their associated beauties, in our humble opinion, surpassed by none we have seen in Switzerland. Farther on towards Myringen is a curious niche in the rock, very much resembling the chimney in the halls of ancient castles, such as the days of chivalry possessed when lance and horn blazoned the wall. Underneath reposed a herd of cattle, which thus imparted to it a very picturesque appearance. Not far from hence are several curious jets issuing from crevices or orifices in the rock. One resembled

a complete thread, another seemed not unlike a film of cobweb, and a third might be compared to a fall of transparent hail. Near to Myringen are two cascades called *Alpbach* and *Muhlibach*. We dined here, and made some small purchases; one a magnificent specimen of the insect *Capricornus*; and salad spoons, &c. of yew finely carved, where advantage, as in the *onyx* when cut in *cameo*, is taken to bring out one of the colours only in the relief, while the other forms the ground. The people of this town are tall in stature, the men about six feet, and the women five feet six inches. It is celebrated for *ancient* cheese; some has been introduced at table 130 years old. Hemp, barley and oats are the chief articles cultivated here.

Though the climate of the Canton of Berne is not hot, it must be now much warmer than in the days of JULIUS CÆSAR, when the people of Helvetia set fire to their twelve cities, and 400 villages, and quitted their country for a warmer region. There is a great diversity of climate. In some districts the term of vegetation only endures for three or four months, so that corn and fruit ripen badly, or not at all. In the valley, wheat is grown; and reaped in the month of June, and in higher regions the oat and barley, the only grains that can be cultivated, are not ready to cut down till the month of September.

In the Canton of Berne the wolf, lynx, alpine hare, &c., are very common. A few years ago a wild cat was destroyed in the vicinity of Berne. Old people now living, remember to have seen at Grindelwald, Lauterbrunnen, &c. flocks of chamois, from 50 to 100 together. The bear is sometimes seen on the Grimsel, or the heights of Lauterbrunnen, Grindelwald, &c. One was killed on the Grimsel in 1802, and two bears in 1815 destroyed many sheep in the valley of Grindelwald. This animal comes from the Canton of Tessin, where it is indigenous, or from the mountains of Savoy, and it is only when the weather is very severe that it ventures into these regions, in search of food. The wild boar from the forests of the Jura ranges as far occasionally as Bienne. At Lauterbrunnen the flesh of the marmot, which sleeps soundly at the foot of eternal snows, is much relished; it is scalded to remove the hair, and then roasted; it is also preserved, smoked and salted. The ornithology of the Canton of Berne, from its diversity of climate, chiefly in reference to altitude, does not materially differ from the surrounding Cantons. When the season is severe, flocks of the wild swan visit its lakes. In January 1814, a cormorant was seen on the Lake of Brienz, in which is fished the Brientzling, so called after the name of the lake. Near to

Thun, at an elevation of 1800 above the level of the sea, the vine is cultivated. The beech is found at 4500 feet high, and the oak at 3360. The elm and oak succeed at an elevation of 4100 feet; and the *Pinus sylvestris*, though discovered at an altitude of 6400 feet, does not prosper. The flora of this Canton is very extensive and varied. The Lutchinen falls into the Lake of Brientz, not far from Interlacken, and the Aar, rising from the Glaciers that lie between the Schreckhorn, and the Finster Aarhorn, 13,176 feet above the sea's level, rolls its *golden sand*, sweeping past Myringen into the Lake of Brientz.

Having surveyed the surrounding country, we took our leave of the Canton of Berne, to pass the Brünig, by a path 3,579 feet high, into the Canton of Underwalden. Before we left Myringen, at half past ten o'clock, the thermometer was 72°, and the hygrometer 22°5. Our walk over the Brünig was very pleasant, though somewhat fatiguing: now and then we were embowered among trees, and twice came suddenly and unexpectedly on pretty pasturages, with their challeys calmly reposing in the lap of verdure. From our highest elevation, the view of the valley and lake of Brientz, which we had just left, was most imposing, presenting many a sublime and beautiful image to the poetic vision,

or the *beau ideal* of mind. The view of the Valley of Sarnen from hence is quite a picture, and one of the richest kind. Beneath us lay the Lake of Lungern,—an unruffled mirror, “calm as settled hate,” reflecting from its glassy waters, dark and deep, the mountains and their brown garniture of pines, while, in patches, in shallow places, the water-lily sported its snowy chalice, floating among discs of green leaves. Long before we arrived at Lungern, we found that we had got into a *Catholic* Canton; the cross had announced this. On our descent of the mountain, and not far distant, was a chapel or station, in which was enshrined a paltry representation of the Madonna; a poor ragged boy was kneeling before the image, telling his beads, and this was followed in due time by beggars, insulated or *en masse*, and so beset were we, that it was not without difficulty we reached the miserable village, from which we were glad to escape as promptly as possible.

SEBASTIAN PIERRE engaged for us a sorry vehicle, little better than a cart, without springs, but the only machine of the kind that would contain ourselves, the guide, and driver. The horse was very restive, and as we skirted the Lakes of Lungern and Sarnen close to the water’s edge, which are extremely precipitous and profound, our seat, altogether independent of

our *vaulting*, was not the most soothing and tranquillizing, and we should most earnestly advise those who follow in our route, to *walk*, if they value their personal safety; for, suppose they succeed in obtaining a *char-à-banc*, it is not the stoutest vehicle in the world, and they must submit to the caprice of the horse. A mule would be much safer in this district. All we saw of its inhabitants were pictures of idleness, dulness, and distress,—sad scene for the philanthropist. Rags, filth, and wretchedness, however, are the indigenous trophies of Catholic Cantons, and comfort and happiness seem to bid them for ever farewell.

It was late when we arrived at Sarnen, from whence the valley takes its name. Our landlord at the inn where we remained for the night, was extremely civil and obliging, but the *salle-à-manger* was of the most ordinary kind, and presented a very motely assemblage of diversified characters. On the left Mount Pilate, with its seven towers, and on the right Mount Rhigi, queen of mountains, like the Pillars of Hercules, form a bold feature in the scenery of the Lake of the four Cantons. The new church of Sarnen is covered with red tiles, and surmounted by a spire. The lake is 1580 feet above the sea's level, and Sachlen on its verge, contains the tomb of NICHOLAS FLUE,—a name dear to.

Switzerland, whose patriotic eloquence, in 1481, served to cement in the bond of amity the then distracted Cantons. The northern extremity of the Lake of Sarnen extends to the base of the Arniberg, and between this lake and that of Lungern, stands the small Town of Giswyl, and a connecting stream flowing from the Lake of Lungern unites the two lakes of the valley. The scene presented by this valley is extremely picturesque and beautiful, and the *Diorama* is certainly its faithful representative. The chain of the Brünig, of which Wyllerhorn is the most elevated summit (5,895 feet high), closes the valley, and far above, in the back ground from the Canton of Berne, the Wildgest Horn (7,800 feet elevation), silvered over with snows, rears his stately dome. The Valley of Sarnen is a sweet terrestrial paradise. The condition of its inhabitants is the only shade of the picture, and dismal and dark it is,—it is an Arcadia and a Tempe, and, abstracted from man, presents whatever is sublime and beautiful in creation,—lovely in vegetable being, and venerable in the majesty of mountains.

Early on the following morning we left Sarnen for Stanz, where we arrived at eight o'clock. Shortly after breakfast we visited the church, and took a look at its golgotha, or place of skulls, where the *crania* are ranged on conve-

nient shelves, and occupy niches somewhat like pigeon-holes, duly labelled, with name and date of demise. The church presented many trophies of miraculous cures by saints, memorialized in pictures and baby wax-work. One had left the crutch on which he *once had leaned*,—a votive offering in the “house of Rimmon his God.” Two of the altars were under repair; three of the radii of the halo on the crucifix which surmounted the chief altar, were defaced, we were informed, by the bullet that killed the priest while officiating, fired by the French, who entered the church on horseback. The churchyard was decorated with numerous iron crosses, many of them gilt, and some of them adorned with little paintings, tolerably executed. The graves were covered with pinks and boxwood, and stone basins and pans, with bunches of box, were attached to every angle, and a due allotment of salt and water, wherewith to sprinkle the sod. In the room where the Diet sits, in the Hôtel de Ville, we saw the fine picture by WOLMAR of NICOLAS DE FLUE, taking leave of his family; and on the roof, an inferior production, the Judgment of Solomon. The President’s chair was decorated with the double key, the armorial insignia of the Canton. In Stanz is a fountain of black marble, with the statue of WINKELRIED. The dress of the people here was

very peculiar: the men wore a cockade in their chapeau, and the females had their hair intertwined with white tape, with bandeaus, and festoons, and further decorated with large skewers, quite a *tête ornée*, and in sufficient profusion. The hats are flat, painted underneath, and covered with ribbons, dyed all the colours of the iris. In the *salle-à-manger*, where we breakfasted, and where the Diet dines, were two cabinets, one at each end, containing the armorials of the Landammenn; the folding-doors were thrown open. After we left Stanz, there was pointed out to us on the right, the house formerly the residence of ARNOLD DE WINKELRIED, now belonging to the family of TRACHSLER. On our left was a quadrangular enclosure of stones, which we entered, somewhat Druidical in character, and surrounded by horse-chesnuts: the acts of the Diet are here annually promulgated *viva voce*, in the audience of the people,—a practice similar to that of the Tinwald Court in the Isle of Man. On the roadside we passed several females engaged in beating flax, which was previously almost scorched over a fire. Underwalden was one of the three associates in the cause of Swiss liberty, in 1308. The Catholic religion is that of the Canton, and the only library in its entire extent belongs to the Abbey of Engelborg. Superstition and igno-

rance reign the ascendant, and want and misery, like some "ill-used ghost," walk abroad.

At a small village on the borders of the lake of the four Cantons, we engaged a boat to navigate its expanse. At a quarter before eleven A. M. the thermometer was 68° F., and hygrometer 14°. A dense fog enveloped the surrounding mountains. The temperature of the lake was 67° F. The church bell was heard at a distance, and its tone, softened and mellowed by the lake, had a very pleasing effect on the ear. In the angle near to Gersau, in the strait of Vierwald, it is quite evident that the mountain has shot from its inclined plane into the lake,—a phenomenon of too frequent occurrence in these lands. The view from the lake of the surrounding mountains is extremely fine and diversified; but there are several points possessed of local interest, of an unusual description, and we had not been long on the lake before the dense curtain of fog which had enveloped the mountains around, gradually rose, and unveiled all their magic charms and magnificence. Mount Pilate gloried in his height before us,—sombre from the pines that brace his sides, though here and there the monotony is relieved by the varied shades of patches of verdure. At one time, during the dark ages of superstition, though its dregs still remain, the Council of Lucerne gravely decided,

that none should, without special leave, visit the lake on the summit of Mount Pilate; and the heaviest penalties were inflicted on those who violated the command, for fear some improper person, by throwing in stones or rubbish, should cause storms and tempests to arise, by rousing "the spirits of the vasty deep," and thus drawing on the plain the fell vengeance of the spectre domiciliated in its infernal waters. The shepherds of this mountain were sworn, each returning spring, not only to refuse to act as guides, but also to conceal the path, and the administrator of the oath was paid a florin per day for this purpose. At the base of this mountain, made so formidable by superstition, are little wooden houses, used as cold caves. On 31st July, while the temperature in the shade was 73° F., that in the huts was only 39°; milk can be kept for three weeks, meat for a month, and cherries for twelve months. In one house snow was preserved all the summer.

Gersau, on the left, looked very interesting and beautiful. It is the smallest republic in Europe, and only extends two leagues in length by one in breadth, being bounded by the base of the Rhigi and the banks of the lake. At the age of sixteen years, each possesses a right to vote in the General Assembly. On one occasion there was a public notice threatening exem-

plary punishment to any one who should be found associating with two individuals, who had been convicted of being drunk and quarrelsome ; so strict is the *code morale* of the republic of Gersau.

We passed, on the right hand, a pyramidal mass of rock, perfectly insulated in the lake, and seemingly detached from the adjoining mountain by a slip, but pitched exactly on its base, and crowned by a spruce fir and the *Pinus sylvestris*. The lake, at this place, is estimated at 600 toises depth. Two shepherds were marching like chamois among the alpine rocks, at a great altitude above, imparting to the scene a wild and romantic feature extremely singular. The trees fret and clothe these rocky walks very curiously, and their roots ramify among the rents, and descend to the waters of the lake. My hygrometer shifted to 0°, and soon after veered round to 9°. We landed at 1 P. M. to see the three fountains, which legend informs us sprung up here simultaneously and spontaneously, when the three Swiss met to take the voluntary oath to avenge their country's cause. These three patriots were WALTHER FURST, a rich proprietor of Uri, and father-in-law of WILLIAM TELL; WERNER DE STAUFFACH of Schwitz; and ARNOLD DE MELCHTHAL of Unterwalden. Thirty of their friends joined

with them. It has been supposed that these streams belong to different sources, but this does not appear to me to be the case. The temperature of the air was 65° . The stream on the right hand was $52^{\circ}.75$; that on the left hand $51^{\circ}.25$; and the central one $51^{\circ}.25$ —the increase of $1^{\circ}.5$ in that on the right might be ascribed to some accidental circumstance. Chemical tests detected in all of them the *carbonate of lime*, but neither sulphates nor muriates could be discovered. A house is built over these streamlets in commemoration of the event, and several fruit trees are planted around. The entire mass of rock is evidently a slip, at some period long gone by, from the superior chain. Two churches, pitched on the summit of the mountains above, complete the extraordinary picture.

We descended and crossed the lake. On the left, near this spot, a mountain has fallen, and provided a new surface, on a lower level than that it preoccupied, which is now invested with pasturage for cattle, and the dwellings of men: thus has that surface, which once scorned vegetation, become clothed with fruit trees and underwood; while it towered above the clouds, it exhibited the invariable garb of winter, but now it has changed its climate, and with it has become instinct with animal and vegetable being. SEBASTIAN PIERRE informed us, that a bear which

weighed 800 lb., was killed, about eight years ago, in a valley on the right. It was discovered quietly feeding with a flock of sheep. The lad who tended the flock ran home and told his father that a *great dog* was feeding with the sheep. They immediately went out, and it was killed by the father. It had most likely been chased previously by huntsmen, and wearied out. One hundred francs is the premium given by government for the heads of wolves and bears.

We landed at Tell's Chapel, which appeared to have been once prettily covered with discs of wood, which are often elegantly arranged in the houses in the Canton of Underwalden. It seems to have been repaired in 1719, but is now going fast to ruin. We found several people here engaged in splitting up billets of wood. The principal events in the life of the hero are painted somewhat rudely on the plaster of the walls. It was at this spot that WILLIAM TELL sprung from the boat, and escaped from the clutches of GESSLER. As the legend of WILLIAM TELL is familiar to almost every one, it is unnecessary to detail it at length. The tyrant GESSLER, the servile tool of the Emperor ALBERT, had exercised the most ferocious acts of cruelty. He was a man full of malignity, proud, haughty, and imperious, and carried the exercise of his power so far that, in 1307, he caused his hat to be erected on a

pole, in the Great Square of Altorf, capital of the Canton of Uri, and demanded reverence and obeisance from all who passed it. WILLIAM TELL refused the homage required by the tyrant; whereupon he was seized, and his youngest son being bound to a stake beneath a lime-tree, and an apple placed upon his head, TELL was ordered to shoot at this apple with his cross-bow. The father succeeded in splitting the apple in twain; but on GESSLER's demanding the reason of his having a second arrow concealed about his person, TELL replied, "To have killed you, had I killed my son." On this answer, the furious tyrant caused TELL to be bound, and carried to the boat in waiting, for the purpose of having him conveyed to a stronghold in his own castle. A storm arose, and WILLIAM TELL was unbound for the purpose of navigating the boat, being well acquainted with the local circumstances of the lake; and it was here that he leaped from the boat and escaped, having pushed it off, to brave again the fury of the storm.

After leaving Tell's Chapel, we skirted the lake on the same side, and passed a church, and near it a mill, in motion, where, about twenty years before, a mountain tumbled into the lake; and its waters, thus raised, swept away into its vortex two houses and fourteen persons. As

we advanced, the rocks seemed very singularly contorted; and the vertical walls in many places presented a smooth surface, but slightly inclined. We observed also a picture of the Madonna, imbedded in the surface of a lofty rock, over a vaulted cavern. The vertical walls of limestone towering high above us, were finely fringed and feathered on their escarpments with trees and shrubs, while spots of lichens mottled the surface; and here and there the *Lichen sulphureus*, *geometricus*, &c. painted the mountain side, where no other species of vegetation could cling. Near to Brunen these rocks become curiously castellated, and much resemble enormous masses of brick-work, covered with shelving roofs. The postman from Lucerne to Italy departs by the lake four times a week; and when the navigation becomes dangerous from storms, he traverses the mountains above.

The boats which navigate this lake, and those generally in Switzerland, are but ill adapted to encounter the storm, or even to traverse such vast surfaces of water in summer, though they might suit river navigation well enough. They are extremely shallow and flat bottomed, therefore can have but slender hold of the water. The slightest motion, or even change of position, is quite sufficient to upset the frail bark, and the balance must consequently be equipoised

with the nicest care. The sail, too, is one of an improper form ; it is quadrangular, but should certainly be *triangular* ; and, from the sudden gusts of winds which issue from the mountains, and are occasionally violent, it must be always held in the hand, ready to be lowered in a moment.

We landed at Brunen, and dined at an inn which presented a lovely prospect of the lake full in front. On our right were the *three fountains*, and on the left *Tell's Chapel*, which we had just left. We perambulated the town, but found nothing worthy of notice. One of the mountains which overlooked Schwitz, the capital of the Canton, was gilded with the last rays of the setting sun, and appeared beautiful. At this place was signed the famous league between Uri, Schwitz, and Underwalden, on the 13th January 1308.

We proceeded onward to Schwitz, and observed in a garden on our right a gigantic plant of hemp, and what might justly entitle it to the name of *tree hemp*. It was at least eight or nine feet high, and had *branches* from the main stem three feet long. When we entered the town, we perceived on our left a tolerably fine house, which we were informed was the residence of the *Landammann*. The church, full in front, and on an eminence, with its church-yard

display of a thousand gilded and figured crosses, was peculiarly picturesque and singular. The roof of the church is very neatly painted *al fresco*, and the organ delicately figured. Our guide here made the accustomed genuflexion and sign of the cross before the altar, and, turning to us, intimated that it was mere form; and we had reason, on more occasions than this, to doubt the sincerity of SEBASTIAN PIERRE'S catholicism. The town, from being the cradle of Swiss liberty, not only gives the name to the Canton, but the country. The original name of Switzerland was *Helvetia*; under CONRAD LE SALIQUE it was called La Haute Allemagne; and, after 1313, assumed its present name. At Einsiedeln, in this Canton, is an abbey of Benedictines, and in the chapel adjoining is a celebrated image of *Nôtre Dame des Ermites*, presented by the Abbess of Zurich. It is the LORETTO of Switzerland, and thither the tribes go up annually in immense troops. In 1817, the number of pilgrims amounted to 20,000. Here, too, may be purchased fragments of the *true cross*, in quantity sufficient to roof an ordinary building—a relic which certainly seems, from its copious supply and universality, to possess at least *one* of the properties of matter, *its infinite divisibility*.

We left Schwitz for Goldau, and had on our left

the snowy ridge of the Blumen-Alp. The scene of the Lake of Lowertz before us was placid, and the rays of the setting sun sparkled on its surface ; a boat glided on its waters, and a swallow dipped its wing in the wave as it flew over it. On one of two islands plumed with trees, there was a castle ; the varying light and shade of the living picture before us might have supplied the contemplative philosopher with sufficient images, and with every angle the scene and imagery changed. The confines of the lake are much curtailed by the fall of the *Rossberg*, a mountain toward the right ; and opposite to this destructive mountain stood the Rhigi, with a crown of clouds. We walked over the road, which had been raised by this catastrophe upwards of 100 feet above its former level. It required the labours of 400 men for a considerable time to cut and form a road across the dreadful ruin.

CHAPTER X.

GOLDAU AND THE RUIN OF THE ROSSBERG—THE
RHIGI—SUBLIME PANORAMA AS SEEN FROM
THE RHIGI-CULM—LUCERNE.

THIS terrible catastrophe occurred on the 2d September 1806, by the fall of the Rossberg, which rose originally 3516 feet above the level of the sea. This mountain has also been called Ruffiberg, or Spitzbühl. The eventful morning appears to have been ushered in with rain, which continued until noon; and during the entire day the heavens were sad and sombre, as if in anticipation of the event about to ensue. About 2 P. M., the forests and orchards which compassed the Rossberg appeared convulsed, as if shaken by the invisible hand of Omnipotence, and occasional fragments of rock were observed to fall. About an hour after, the villages of *Goldau*, *Lowertz*, *Rothen* and *Busingen*, were overwhelmed, and a once smiling valley, where

600 peaceful shepherds and their families dwelt, with their flocks and herds feeding on the plains beside them, was covered with the rocky wreck of fell desolation and ruin, which circumscribed a square league. It was a dread picture of destruction. Thus, in one awful moment, was an Arcadian vale turned into a *Gehimmon* or valley of shrieking. In the ruin were involved two churches, 111 houses, 200 granaries and stables, more than 400 persons, and at least 325 heads of cattle. This fearful accumulation of the wreck of the Rossberg formed a new mountain, and diminished the apparent altitude of the Rhigi, on this side, by elevating the plain at its base. Strangers, whom curiosity had led toward the Rhigiberg, were unfortunately overwhelmed, as well as the inhabitants of the plain.

Dr ZAY of Arth (a small town on the borders of the Lake of Zug, and contiguous to the scene of desolation), has given us, in a little work published originally in German, but now translated into French, a deplorable yet faithful picture of the catastrophe *. Entire forests, we are informed, were perceived to descend *en masse* from the mountain, and advance with accelerated movement into the plain, accompanied with rocks of the magnitude of large buildings,

* "Goldau et son district," &c. Lucerne 1820.

which were launched through the air with the rapidity of an arrow to the distance of nearly two leagues. Houses, cattle, and human beings, were engulfed in this vortex of destruction and whirlwind of death, and seemed to float in mid-air. The Lake of Lowertz, filled up by enormous masses of rock, no longer confined within its natural precincts, rose like a wall, and extended its desolating wave far and wide. Two lads and two young girls, who were tending their goats on the Saigel, were raised into the air, and propelled by the current to a great distance. Flames burst forth (in all probability attributable to a charcoal oven) and gave an awful character to the scene; while it readily accounts for the report that gained ground at an early period of the dread catastrophe, that a volcano had broken out. The Rhigi felt the shock and shuddered! and the windows of the *Maison de Ville* at Schwitz rattled in their casements. The Seeven, a village near the lake, on the extremity toward Schwitz, appeared as if afloat on the waters of Lowertz; and numerous fish were swimming about in the streets of Steinen. A party, consisting originally of eleven persons, who had come from Berne on an excursion of pleasure, were engulfed, it is supposed, near the chapel of Goldau, where the mass of

ruin was more than 100 feet deep, and only *four*, who had happened to wander to a little distance, were left to tell the fearful tale of distress. These survivors were two Messrs MAY of Berne, M. JOHN of Gotha, tutor in the family of M. MAY of Roued, who was entrusted with the care of his son, and also of LOUIS D'ARBON, young MAY's friend, both of whom perished; and M. DE DIESBACH, who lost his young bride, and was himself carried in a litter severely wounded to Zug. "Jamais," says the Doctor, who was called to M. DE DIESBACH, "je n'y pense sans éprouver une violente emotion; jamais je ne pas témoin d'une scène plus déchirante, moi qui comme médecin ai été à portée d'en voir de si douloureuses. J'ai su de plus par des personnes qui avoient vu à Harmetlen M. DE DIESBACH après l'événement, que dans son désespoir il vouloit se briser la tête contre des rochers."

A melancholy colloquy is stated to have taken place between a child and her nurse, buried among the rocks, and separated from each other by them. "Come," said the child, "do take me away." "The Day of Judgment," said the girl in reply, "will soon be passed; we shall then find ourselves in Heaven, and be for ever happy." A gentleman of the name of DETLINGEN had a pretty house on the side of the hill;

at the moment when the waters of the Lake of Lowertz rose, there were in his house a female servant and two of his daughters; one of these was five years old, and the other nineteen, the latter *dumb*. She was the only one saved.

There is detailed a still more wonderful interference of PROVIDENCE, in the case of an infant of two years old, belonging to persons named METLER, who, though seemingly swallowed up with the cottage in which it lay, was ultimately found calmly asleep on its mattress, on a mass of rubbish at some distance. In minutely examining all the circumstantial details of this remarkable instance of preservation, we find ourselves as utterly at a loss to account for it as Dr ZAY seems to have been. The cottage had a solid roof, the windows were too small to permit the passage of the mattress, the door was locked, and the wooden walls and rafters were crushed to pieces. The infant when taken up SMILED. The parents were absent from the village during the catastrophe, and on their return had the happiness of receiving their infant uninjured.

The effect on the minds of the survivors seems to have been that of stupor and total abstraction. They thought that the final day of doom had arrived, and that the fall of the Rossberg would be promptly followed by that of the Rhigi, and

other mountains around; and, indeed, it seemed almost to realise the Apocalyptic vision of the Day of Judgment, "when the wicked shall say unto the mountains and to the hills, Fall on us and hide us from the wrath of the Lamb." It appears, from undoubted authority, that this is not the only catastrophe which the annals of the Rossberg have to record, as a former village, named Rothen, was destroyed by a fall from the same mountain, but the date is not well ascertained. 180,000 francs were contributed toward the relief of the unhappy few who survived.

It was late in the evening when we arrived at the inn of Goldau, or rather where Goldau once stood. It was moonlight, occasionally obscured by clouds. The circumstances connected with the scene beneath and around, all occupied my mind, and thought was busy in her chambers of imagery. I could not forget that, in all probability, we then were over the profound grave of the seven individuals from Berne, who had perished near this spot. Amid the multitude of ideas which engrossed me, I took a solitary walk over this dread wreck of matter. It was a sorry sight! The moon threw a calm and settled, to me a melancholy, ray upon this vast sepulchre. On the side of the hill opposite gleamed here and there the light of the

challet, like stars twinkling in the sky. A bat flittered past me, and a beetle, whose sound was like a parting knell over these deep caverns of the dead, where rocks filled up the graves "as dust to dust." What a funeral monument was here! As I clambered among the fragments of rocks, some of terrible magnitude, I heard the song of the grasshopper, and the reed sighing in the wind, as some breeze shook it amid the fens which here and there abound. The very vegetation was funereal, or appeared to me to wear a sad and mournful livery. The cypress, the yew, and the aspen, were not there; but the *lurid nightshade* and the *trembling grass* had each their *memento mori*. When "the storied urn and animated bust" shall have fallen from their niche, and all the pomp and blazonry of the sculptor's art have forgot their cunning, the ruin of the Rossberg will attest the terrible event, and be the permanent register of these rocky tombs to distant ages. Each rock around me looked as a grave and monument, and from its stern front seemed to rebound the words, "SISTE VIATOR! PULVEREM HUMANUM CALCAS!" I had wandered not knowing whither I went, till my foot slipped into a pool of water, and roused me from my reveries, and I returned to the inn; before which rose the Rhigiberg, that we were to ascend the following morning. No

cloud muffled its diadem, and, thus unveiled, it stood a noble sight. At one side was a chapel, where a glimmering lamp burnt the entire night before an image of the virgin, which was placed over the altar.

We left our inn the following morning about half past 6 A. M. for the ascent of the Rhigi. In the meadows we observed a profusion of the autumnal crocus, and on our ascent the *gentian*, *scabious*, *monkshood*, *daisy*, *Centaurea montana*, &c. A large flock of goats, some hundreds in number, crossed our path. We passed several *stations*—shrines for the devotee. In one of these was a rude and gigantic representation of our Saviour sinking under the burden of the cross. It was a hideous form, and there was a brutality in the exhibition which excited feelings of the strongest horror and disgust. After many a weary circumvolution, we at length entered the valley of *Imsand*, where the view is more limited. Here stands the chapel of “Nôtre Dame des Nieges,”—a pause for the weary pilgrim. The foundation of this building was laid in 1689, but being found quite insufficient for the vast influx of pilgrims, it was taken down and rebuilt in 1719. Hard by is an Hospice, inhabited the year round by three *Fathers* and a Capuchin lay brother. A beggarly Capuchin thrust his head out of one of the wickets of the

Convent as we passed. This valley is much frequented by catholics on saint days and Sundays, but particularly on the two high festivals celebrated here in the chapel of our Lady of the Snows, which occur annually on the 22d July, the day of St Magdalene, the fête of the mountain herds ; and the 5th August, the day of our White Lady. On these holidays are the grand rendez-vous of the shepherds, while thousands from the country round join them in the sacred solemnities of telling beads and singing *Ave Marias*. In the chapel were many trophies of the miraculous agency of this "Avenel." We counted no less than *twenty crutches* hung up as votive offerings to the snowy dame ; and tawdry pictures, and waxen arms and legs, multiplied *ad infinitum*, the registers of the halt, the lame, and the blind, who had leaped and walked, and had at least seen "men as trees walking," if no more, at the spell of this blanched Madonna.

Soon after leaving the shrine of our White Lady, we met a group of three damsels and a man uncovered tripping lightly. They told their beads and chaunted gaily their "*Ave Maria, gratiæ plena*," &c. the man leading, while the females made the responses. We were saluted notwithstanding, with all due courtesy, and "Je vous salue," though not likely to be incorporated among the language of their beads,

seemed to dovetail well enough. We arrived at the comfortable inn at the *Rhigi-staffel*, built in 1816, and enlarged in 1822, at half-past 9 o'clock A. M., having occupied three hours in the ascent. The thermometer stood at 63°, hygrometer 22°, and water boiled at 101° Fahr. As we ascended we perceived clouds hovering over the mountain, which at last condensed into one impenetrable casque of vapour; and when we arrived at this point, alas!

“ All in mist the world was lost below.”

At this inn we found a family who had made it their temporary residence, and were trying the effect of mountain air: and, in complaints of the chest, and pulmonic diseases, we think the system may here receive a new pulse. Nature seemed to favour this view of the case, and had strewn around not only the *Lichen rangiferinus*, but also the Iceland moss, which we observed in abundance; and here is a rarer, purer air, unmingled with the stagnant vapour and impurities of the valley, or the crowded population of the town, and all its noxious exhalations. A steep and winding path brought us at length to the loftiest point of Rhigi, “ Queen of Mountains.”

The Rhigi (*Riga*) has been poetically called *Regina montium*. In the days of other years its name appears to have been *Mons rigidus*. Three lakes repose at the base of the Rhigi, namely those of Zug, Lucerne and Lowertz. The mountain may be considered as forming an almost peninsular promontory, of eight to ten leagues in circumference—a kind of outpost to the great Alpine ridge. Opposite the Rhigi stands the sombre *Mons Pilatus*, her rival power, and by her side the Rossberg and its ruins. The Rhigi is composed entirely of *breccia* or *conglomerate*, and the highest point is called the *Rhigi-culm*, elevated, according to the measurement of General PFYFFER, 5676 feet above the level of the sea. At the Signal Point, where we arrived at half-past 11, the thermometer was 60°.5, having fallen 2°.5; the hygrometer was 15°. Not far from hence is a cross, at the base of which a gentleman's servant was killed the preceding year by a flash of lightning.

We had been some time on the mountain, and the shroud of mist still enveloped the Rhigiberg, and on looking down into the profound of vapour, we witnessed a most curious and beautiful spectacle: it was that of an iris glowing in all the tints of the prism, and of a *horse-shoe form*, imbedded deep in the vapour. I never before saw a rainbow of this form; its

dimensions, too, were very limited. The clouds moved, and seemed to pass before us in review,—fit shrine for OSSIAN'S ghosts. At length they began to disperse, and dissolve into transparent air. Sometimes they would seem to linger on the mirror'd lake, as if they wooed it, and were loath to part, and then they would cast their veil over the distant mountains, dimly seen through their transparent medium; but, at length the curtain rose from over the landscape, as if it were drawn into Heaven by an invisible hand, and discovered its unique and glorious panorama. "We looked o'er half the world;" the Rhigi-culm is marked by a stand, which we mounted by a short ladder, and from this point the astonished eye unexpectedly plunges into the immense profound which lies unveiled before it in all its vastness,—its length and breadth and depth stretching far and wide into immensity. A lovely hemisphere was above our heads, and beneath and around a terraqueous scene, outwitting the necromance of imagination or witcheries of poetry. None "but itself can be its parallel." Fifteen lakes spread before us their reflective beauties, including those of Sarnen, Lucerne, Zurich, and Zug, and many sheets of water not numbered as lakes, are seen besides. The eye seems gifted with new vision: at once a telescope and a camera obscura. Mapped out be-

fore it on one fair animated canvas is seen a great part of the Cantons of Underwalden, Lucerne, Schwitz, Zug, Argovie, and Zurich; and in the noble circle which circumscribes us, are the mountains of St Gall, Appenzell, Glaris, the Grisons, Tessin, Uri, Berne, Neufchatel, Soleure, Basle, Schaffhouse, and Thurgovie. Here was a circle of the "everlasting hills,"—"a building of God, not made with hands,"—where Alps on Alps arise. The vision wanders over more than Switzerland,—it penetrates into the Vôsges and among the mountains of the Black Forest of Germany. The superb relief of the Alpine chain, and their snows and glaciers, is immeasurably vast and sublime. Nought wanders in their solitudes but the condor of the old world, whose wing wafts him above the regions of the clouds, the summits of Mont Blanc or of Rosa, or the Jungfrau or the Schreckhörn. Within the vast circle thus flanked by walls of adamant, are seen flocks and herds, and trees and pasturage in liveries of green, cities, towns, villages; the bark gliding on the lake, and all the phenomena of art and nature,—a camera obscura of life and being, crowd upon the senses, with their overpowering wonders. On the Rhigi mountain feed 4,000 heads of cattle, besides vast flocks of sheep and goats. On this sublime pedestal, I thought of the Scripture vision, "ALL

THE KINGDOMS OF THE WORLD IN A MOMENT OF TIME;" but until now I had not learnt its emphasis or power. Here all its magic crowded on the surprised and delighted sight: I shall never forget its wonders, and when I read the expressive language, I shall remember the panoramic vision of the Rhigi-culm.

From the platform on the Rhigi-culm, we went to a seat near the cross, and not far from another inn, erected in 1816. The view from this seat overlooks Goldau and the ruin of the eventful Rossberg, stretching in width five or six miles from the Lake of Zug to that of Lowertz, —a fate, we fear, in reserve for the Queen of Mountains, and the towns and villages beneath, especially Weggis and Kusnacht: nor is this mere speculation or fancy. Immense are the rents presented throughout its vast extent: we cast stones into some of these, and they issued from the mountain side some thousands of feet below. That the Rhigi has been shattered by some convulsion, is evident from the ruin, disorder, and dislocation which are here and there observable on its flanks,—formed of the same materials, and operated upon by the same causes as the Rossberg, we see no alternative; and terrible will be the fall, and more extensive and disastrous, in all human probability, will be its consequences. Its inclination, too, similar to that

of the Rossberg, adds to the amount of these probabilities. The infiltration of water through the rents, and a power, greater than that of the wedge, arising from its expansion in the act of freezing, would shatter and disjoint its mighty form,—a power that has burst a mortar with a force exceeding that of gunpowder. May Rhigi long maintain her station, but we do not see on what principle she can claim exemption.

The temperature of the mountain varies exceedingly, corresponding with the elevation of the scite or shelter afforded from woods. The dell, skreened from the bleak winds of Heaven, and a southern aspect, are circumstances that will rear a kindlier vegetation. It has been stated, that 800 species of plants have been collected from its sides and summit; rhododendrons, vacciniums, gentians, and the napellus, &c. On our descent we noticed a fine cistern, wherein a great quantity of large trout were preserved. We saw beautiful groups and patches of gentians, sporting their blossoms of blue, in rich profusion, and collected on our path both cranberries, whortleberries, and raspberries.

As we proceeded to Kusnacht, we passed through the defile where WILLIAM TELL gave the tyrant GESSLER the mortal wound,—an event commemorated by the erection of a chapel on the spot. Within the chapel is contained a

miserable melange of catholic trumpery. On the wall without is a wretched painting, representing the hero of Swiss liberty, giving the despot the *coup de grace*; but other incidents in TELL's life are improperly included, not being contemporaneous. At a short distance from Kusnacht is a hill, from whence we perceive the ruins of GESSLER's Castle.

At half past three P. M. we arrived at Kusnacht. The thermometer was 74° F., and hygrometer 22°. Our dinner at the inn at this place was excellent, and elegantly garnished with flowers, especially the dessert, which consisted of nine dishes; hot almonds, fried in sugar, beautiful rolled up wafers, and some large and delicious peaches from the garden of the inn, fine grapes, rich cakes, and sweetmeats, or *bonbons* in papers, with various mottoes, &c. A fowl was introduced on the dinner-table with a sprig of rosemary in its bill, which to us had rather a novel appearance, though it certainly looked very pretty. *Kirschenwasser* is made in this neighbourhood to a considerable extent, and, we understood, might be purchased here at 10 *sous* (5d.) *the bottle*. In the streets of this town we observed many individuals peeling hemp, and females spinning with the distaff. The churchyard was decorated in a similar way to that of Stanz, with the same adjuncts and appendages. The graves were almost all covered with

pinks, many of which were in flower. On one of the altars in the church, is St CLEMENT reposing in state, in a glass coffin; the skull seemed to be blanched. There is a large boat suspended from the ceiling, with a huge wax-candle for the mast, the Virgin at one end, and some saint at the other; the bark contains two rowers besides these holy personages. In the chapel of the Purgatory we observed a pyramid of skulls. From hence we enjoyed a fine view of the lake and the Pilate-berg*, belted with clouds. Temperature of the air 74°; hygrometer 21°; temperature of the lake was 64°, soon after we embarked on its surface for Lucerne. The waters of this lake, under analysis, gave indices of *lime*, and a *muriate*; but *caustic baryta*, *lime-water*, *nitrate of baryta*, &c. effected no change. The evening was calm, and we had a most delightful sail. The planet Jupiter rose over the summit of Mount Rhigi, and the constellation of Ursa major crowned the Pilate-berg, while lightnings played around his girdle. We passed a chapel in a small island, dedicated to St NICOLAS, patron of the Lake of Lucerne, and landed at a quarter past eight o'clock P. M., at the Hofthor, where we paid, on entrance, a very small coin,—a diminutive fraction of a batzen, namely, a *heller*, in value about $\frac{1}{4}$ th of a penny!

* *Berg*, mountain.

LUCERNE was formerly called *Lucerna* or *Luceria*. Mount-Pilate on the one hand, and Mount-Rhigi on the other, impart bold features to the surrounding scene. The city is situated on the banks of the Reuss, which divides it into two parts. The four bridges are exceedingly remarkable and curious, and form the most singular objects of interest in the town. Reussbrücke, or the bridge of the Reuss, is the only one which is uncovered, and is the most ancient. It is constructed on piles of wood, is 150 feet long, and 26 feet broad. The second is the Hofbrücke or Hofbridge, which joins the town to the Cathedral, near the junction of the river with the lake, and is 1380 feet long: on its rafters or cross beams are painted 238 pictures, one-half of which are subjects from the Old Testament, and the other half are taken from the New Testament; the latter in front in going to the cathedral, and the former in returning from it. In a particular part of the bridge, from whence we obtain a fine prospect, General PFYFFER, in 1790, had registered and inscribed the names, distances, and heights of the principal summits of the higher Alps, as seen from it, commencing on the east by the Rossberg, and terminating on the south by Mount-Pilate. The third bridge is called the Kappel Brücke or Chapel Bridge, built in 1303; it is 1000 feet long, traver-

sing the lake where the Reuss joins it. Toward the centre it forms an angular curve, and here comes in contact with an ancient tower of Roman construction, called now *Wasserthurm*, or Water Tower. It crosses the river at its junction with the lake from whence it flows. The rafters of this bridge are also decorated with 154 pictures, seventy-seven relating to the more remarkable periods in the history of Switzerland, and the other half connected with the individual histories of two of the patrons of the city, St MAURICE and St LEGER, Catholic legends. The *Wasserthurm*, it is conjectured, was once a pharos or watch-tower. Before the revolution of 1798, the archives of the state and also the treasure were kept in it. The fourth bridge, called *Mühlenbrücke*, or the Bridge of Mills, has its rafters adorned with pictures, thirty-six in number, a copy by MEGLINGER from the celebrated Dance of Death, supposed by HOLBEIN. On this bridge is a shrine and image, and the due quantity of oil is each night consumed before the saint; it was a frequent promenade, as it almost fronted our hotel, the "Gasthof zum Rössli," the White Horse, a very excellent inn.

In the collection of the Banker Nager, we saw little worthy of note. Some huge specimens of rock-crystal from Mount St Gothard, sold at reasonable prices: there were also onyx neck-

laces for disposal, and various other articles. At a bookseller's (Meyer), we were interested in a fine panoramic painting of the view from the Rhigi-culm, which seems a faithful portrait of the surrounding scenery. We were very much gratified by seeing the antiques of the Arsenal. In the armoury we noticed among others the coat of mail worn by Duke LEOPOLD of Austria, at the battle of Sempach. The iron casque of the famous reformer ULRICK ZUINGLE of Zurich, killed in 1531, at the battle of Cappel; flags and standards, bows and arrows of olden times; a Turkish standard taken in 1610, before Tunis, by a native of Lucerne. There is also a collection of ancient painted glass. I was presented with an old arrow, having a triangular point, some of these arrows had their points besmeared with a substance, which I found on analysis to be pure *sulphur*. We went to see the immense models in relief of a great part of Switzerland, executed by the late General PFYFFER, which are especially worthy of notice, a wonderful production, and evidence of the extraordinary exertions of this indefatigable man: they are shewn in a wing of the house formerly the residence of this intrepid and distinguished Alpine traveller, who died in 1802. The entire models are represented on 180 square feet of surface, and are composed of 136 pieces. Here

is also a very excellent portrait of the General, and among other objects the wooden shoes used in his Alpine excursions, and an ingenious accompaniment serving at once for a seat and a walking stick, are still shown.

We were exceedingly pleased with the monument sculptured in the sandstone rock, to the memory of the *Gardes Suisses*, in the garden of Colonel PFYFFER, and purchased a cast after the original model. In the commencement of the French Revolution, on 10th August 1792, the Swiss guards were called to the Tuilleries in defence of the King and Royal Family of France. The greater part were massacred on the spot, or perished victims on the scaffold, for their fidelity to the cause they had sworn to defend. M. CHARLES PFYFFER of Altishofen (now Colonel), headed this noble band: his life was spared, and he was finally suffered to return home. By a decree of the Directory of Berne, 7th August 1817, an iron medallion, bearing the inscription "Fidélité et honneur," was voted to each of the survivors. On the 1st March 1818, Colonel PFYFFER proposed to erect a monument, by public subscription, and the sum subscribed amounted to 1000 *Louis d'ors*. THORWALDSEN of Rome, the eminent Islandic sculptor, was engaged to make the model, and on the 19th August 1819, the excavation of the grotto was begun. Shortly after this

period the model arrived from Rome, but on opening the box which contained it, it was found considerably damaged, and the noble head of the lion broken into more than fifty pieces. It was, however, put together with tolerable success, by Colonel LOUIS PFYFFER of Wyher. The work after the model, was commenced by LUCAS AHORN, sculptor of Constance, on 28th March 1820, and finished on 7th August 1821. The grotto excavated in the solid rock, where the noble lion, mortally wounded, and having expired, reposes, is 44 feet long, and 26 feet high, and the lion is $28\frac{1}{2}$ feet long, and 18 feet high. This animal, of the colossal magnitude already stated, is represented as having died on a heap of broken warlike weapons, on a shield bearing the armorial *Fleur de Lis* of France. The monument is well conceived, and finely executed. In an adjoining chapel is annually celebrated a catholic funeral service on the 10th August, in commemoration of the event, when 750 Gardes Suisses, a few of the National Guards, and 200 defenceless individuals, maintained an unequal stand against 100,000 soldiers, and an infuriated mob, breathing cruelty and revenge.

Having passed the Hofbrücke, we inspected the parish and collegiate church or cathedral. It is stated that the foundation stone was laid in 695, on the remains of a convent of Benedic-

tines. The present edifice, however, is the erection of 1634. Over the chief altar is a fine painting by LANFRANC: the subject is our Saviour on the Mount of Olives. This church contains three organs: the largest was finished by JEAN GEISSLER of Salzbouurg in 1651, and was the labour of seven years. There are 2826 pipes constructed of English block tin: the largest is thirty-seven feet high, and two feet diameter, and capable of containing 1308 liquid pints.

Here is a most extensive exhibition of rosaries and relics, the *true* cross, and fragments of the *veritable* bones of saints innumerable, though we more than suspect we observed among them fragments of bones certainly not *human*, though belonging to the class *mammalia*; and there were shewn us chalices and patens ancient and modern, and priests' vestments and trappings, rich and gorgeous beyond what the theatre ever sported in its costliest display. This is esteemed the richest cabinet of bones and priests' apparel in Switzerland. *We* certainly do account it strange, why all this ado should be made about the bones of animals "savage and tame," dressed up with silk and tinsel like baby's toys. The multiplication of bones and fragments of bones, presupposes an extensive and unceremonious robbery of graves and charnel houses. The true cross seems infinitely divisible,

or, like the polype, self productive and regenerative ; and then the multiplex array of beads and rosaries ; each bead a prayer *sui generis* ; nor is it once pretended that they possess the principles or *modus operandi* of BABBAGE'S calculating engine. Need we add the recitation of Latin prayers, as if GOD understood no other language than the Roman. They also ransack the kingdoms of Nature, both vegetable and mineral, and so torture her, as if they would have her to tell a lie to support their mischievous fraud. Thus the *Lichen jolithus*, which is sprinkled on the stones at the bottom of St Winifred's well, must needs be saints' blood, and the spots of peroxyde of iron, on a surface of sandstone impregnated with *muriate of soda*, is, by catholic tact, and transubstantiation, transmuted into St Januarius's blood. All these are "cunningly devised fables," nor does it require the penetration of a Paul to see that "in all things they are too superstitious."

We had frequently reason to suspect the sincerity of Sebastian Pierre's Catholicism, but at length he gave us palpable proof of his heresy. While viewing the cabinet of osseous fragments, he turned asside to me, and with a satirical grin remarked, "*On achète ces choses là à Rome !*" A vast cemetery surrounded by porticos environs the church. We were in-

formed that the bodies of the dead at Lucerne were immediately removed from the houses of their friends, and carried to one of those which adjoin the church on the left hand, exclusively devoted to this purpose, where they remain forty-eight hours before interment. In this church-yard are also pans and "holy water," but the *dock-leaf* substitutes the box. There seems to be a considerable demand for this water, so much so, that it is duly prepared in a *large barrel*, a Latin prayer is muttered, and a little salt cast in; and thus divided and subdivided, however much, or attenuated however far, the integral blessing, itself incapable of division, remains inviolable.

There were numerous mallard ducks swimming near the Bridge of Mills, exceedingly tame, and I amused myself early in the morning by feeding them: on one occasion there was a flock of twenty-eight. Convicts were employed in watering and cleaning the streets early in the morning: I perceived twenty of them with iron collars and chains, dragging a cart, &c. and under the surveillance of two *gens-d'armes*. The watering machine was buckled round their body, and had a flexible hose and rose. At Lucerne water boiled at 206° Fahr.

In the environs of Lucerne are many fine walks and views. A pleasant road conducted us

to the pleasure grounds of M. WEBER. It is an elevated esplanade, terminating the hill Musegg, and this part of it is called *Allenwinden*,—Allwinds, perhaps from its exposure to every blast. From the battlements we had a delightful view of the plain below, watered by the meanderings of the Reuss. We had not time to pass to the other side of Lucerne, to the hill called *Gibraltar*, where there is another fine prospect in a contrary direction.

Lucerne is rather a cold climate, and there seldom passes a month, even in the summer, when snow does not prevail on some of the surrounding hills. The supreme power is invested in a council, composed of 100 members continued for life, one half being chosen by the city, and the other by the departments of the Canton; and thirty-six form a quorum, constantly exercising the administration of the judicature. The great council assembles three times a year. The established religion of the Canton is Catholic, and the population of the town is 6000. The length of the lake is about nine leagues, and it is four to five leagues broad. Its depth in some places is 720 feet. The navigation of this lake has been represented as dangerous, but this is only in reference to the storms of winter; or inebriated boatmen, and strangers would surely not be so imprudent as to trust them-

selves to any such individuals. Across this lake is the transit of goods from France, Germany, &c. into Italy by the passage of the St Gothard. Not far distant from Lucerne is the small town of Sempach, renowned for the battle fought on 9th June 1386, under its walls between the Swiss and the Duke of Austria, and where ARNOLD DE WINKELRIED fell in espousing his country's cause.

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CHAPTER XI.

ZUG—ZÜRICH—BASLE ON THE RHINE—
CONCLUSION.

WE engaged a voiture for Zurich, and left Lucerne early in the morning, having for our *compagnon de voyage* a Polish nobleman, whose society we found quite an acquisition, as he appeared to have made the tour of Europe, and was very communicative. It was half past twelve when we arrived at Zug, capital of the Canton of that name, having occupied from three to four hours in the route. The town seemed extremely wretched, and almost deserted. Some of the lower class were engaged in peeling hemp, while all its artizans appeared to us, occupied in nothing else save forging crosses for the tombs in the churchyard, making votive toys of arms, legs, and hearts for the shrines of their saints; we likewise observed a gold-beater, to supply the foil for gilding. We saw the church of the Capuchines, and that of St OSWALD, where the

usual exhibition of chalices and patens, silver-gilt ; and "Babylonish garments," and bones, integral and fractional, were displayed. From thence we took a walk beyond the town to the church of St MICHAEL, their patron saint, and on our way thither observed a small portcullis attached to the gate of exit and entrance. On the left, we noticed over the gate of the house of M. ROSE, attached to the conducting-rod, Canton's electric bells, which sound the alarm on the approach and advent of the thunder-storm. In the "Purgatory" of the church there was a complete collection of skulls, arranged in pigeon niches, duly labelled underneath with name and petition. The graves were conspicuous for their gilded iron crosses, and the sod for roses, irises, and pinks ; the stone-basins were mostly emptied of their saline contents, and the perforated rattles within them seemed to have once seen better days. The fountains of the town were bedizened with images, and there were plenty of beggars ; they have literally "the poor always with them," and seem resolved to keep them so. We were charged four francs each for our dinner, and for the very same repast, our Polish friend was charged only three ; but the Maitre d'Hôtel sports a few English words, and these are always dearly bought by the unfortunate English, who are "pigeon-

ed" and plundered with no sparing hand. Their unbounded display of wealth and utter carelessness, and indiscriminating profusion, seem to make them *fair game*, and constitute them the *spolia opima* of the traffic.

The town of Zug was visited by a severe catastrophe in 1435. A rampart, flanked by massive towers, which formed the abutment of a street, being undermined by the waters of the lake, was engulfed, and sixty persons, including the Landammann, together with the archives of the city, were swallowed up. Every citizen of Zug above nineteen years of age, has a right to vote in its General Assembly, held every year on the first *Sunday* of May, to elect their Landammann, other functionaries, and their deputies to the Diets:—the former holds his office for two years. The following *Sunday*, the eleven *Communes* of the Canton elect Counsellors, Members of the Cantonal Council, composing, together with the Landammann and great functionaries, the executive power. A paper manufactory is the exclusive branch of commerce; few fields are cultivated, and still fewer vineyards. Poor cheese and sorry butter are made. Formerly the town paid an annual tax of fish from the lake, to the Counts of HAPSBURG.

We left Zug for Zurich without regret. At a small village we stopt to give our horses a

little rest and *refreshment*, which consisted of *bread* and *wine*,—a meal, we have observed, very commonly given to horses in some parts of Italy. From the village churchyard, which was considerably elevated above the plain, we had a fine survey of the surrounding country, and in an adjoining garden we observed a peal of Canton's electric bells. We were now in a Protestant Canton, and the transition was truly cheering and delightful; nature seemed to smile in concord, and wear a lovelier robe around us. It was late when we entered the city of Zurich, and the reflected gleams of the numerous lights of the town, from the waters of the lake, formed a very lovely scene. The following day was Sunday. At eight o'clock in the morning there was service in French: the other hours are ten and two o'clock, in German, which is the universal language here. There is much external decorum on this day of the week, the churches seem remarkably well attended, and secular business entirely suspended. We attended St Peter's in the afternoon, the service being in German, was in some measure unprofitable; but the preacher addressed an extemporaneous discourse, full of nerve and emphasis, to a crowded congregation, and all was stillness and attention. There was no organ. The females exclusively occupied the body of the

church, while the men sat in the gallery, or were disposed around the sides. We observed that many kept their hats on during service,—a practice we had also noticed at Lausanne and Geneva, but one to which we cannot say, Amen. The women sat, but the men stood up, during singing. In this church we observed the administration of baptism, which, in some of its parts, resembled that of the Church of Scotland. Questions were put alternately to each parent, who returned the necessary responses, by a bow or courtesy. While the baptismal formula was repeated by the minister, he dipped his hand into the basin, and touched the forehead of the infant *three distinct times*.

The following day we devoted to visiting the various public buildings, and other places of resort and amusement. The Orphan Hospital, founded in 1765, where 100 children are provided for, is among the most imposing edifices of the city. In the vestibule of the Hôtel de Ville, are two large paintings, representing all the fish of the river Limmat and adjoining lake. The stoves were plated with Dutch tiles, and were not inelegant. The various rooms for the *petit conseil*, and *grand conseil d'état*, were supplied with numerous spitting-boxes; so I conclude, smoking tobacco is deemed an essential attribute of the conclave. Over one of the entrances we per-

ceived the words, "*Justitia omnibus idem*;" admirable text! The public library contains two globes of considerable size, some antiques, a few minerals, petrifications, &c. with a model in relief of the four Cantons, and portraits of the burgomaster and other functionaries. We felt gratified by witnessing the arrangement and management of the Institute for the Blind. The children sang very well, and their occupations were various, such as making door-mats of rope and straw, netting work-bags, bead-purses, &c. They read from raised letters, and write with types formed of pins; many seemed to have made considerable progress. On the two towers of the cathedral are equestrian statues of CHARLEMAGNE, and RUPERT Duke of Swabia. In the *wasserkirche* there is an original manuscript of QUINCTILIAN, formerly belonging to the abbey of St Gall. Among other things we visited the designs and sketches of the poet GESNER. In the arsenal there is a vast quantity of armoury, and we believe that there are arms here for the equipment of 30,000 men. Some very ancient armour of the aborigines of Switzerland is carefully preserved. Here, too, may be seen, "on dit," the identical bow with which WILLIAM TELL pierced the apple on the head of his son, in 1307; arrows tipped with sulphur, matchlocks, coats of mail, and casques; guns finely

inlaid, and some discharged by the friction of a steel-cylinder against a flint, which we think, in a modified and improved form, might be ingeniously made to substitute the present structure of the gun-lock, being far more certain and not liable to accident. One of the coats of mail had a cross on the corselet or breast-mail, and the helmet carried the date of 1578.

In the coffee room (*Caffé Saffran*), which I once entered, I observed almost all engaged, either in playing at billiards, or in smoking and drinking, and enjoying the passing news. There is a market every Wednesday, for cloth and thread of cotton, linen, and hemp. We observed the fruit market on the bridge plentifully supplied with apricots, peaches, grapes, pears, plums, figs; and fine apples in great variety, many were large and some of curious kinds, as *white as snow*; the fruit was extremely reasonable. The crop of two pear trees, full of ripe fruit, we were told, at a short distance from Zurich, yielding a produce of nine sacksful, was sold for 8 francs or 6s. 8d. Sterling. Near the *Hôtel de Ville*, stands a pillar with three iron collars attached to it, serving as the punishment for robbers, who are thus publicly exposed. There are three prisons. One is the Tower of Wellenberg, in the middle of the river, for those convicted of capital offences, and in Zurich adultery is considered as a capital crime.

There are some good gardens and promenades. Some of the public gardens project into and overhang the lake, which, together with numerous mills on the river banks add very much to the beauty of the scenery. We enjoyed a fine promenade on the rampart of *Stadelhofen*, near to a cemetery. There is also another of still more frequent resort, that of Gesner, called by the good people the "Modern Theocritus." This walk is situated on the confluence of the Limmat and Sihl. Here is a cippus of black marble, surmounted by an urn. As we passed, we perceived a monument in *alto rilievo*, under a covert, by an artist of Rome; it seemed injured in parts. The Botanic Garden of Zurich has received supplies from the late ANDRE THOUIN of Paris and Professor THUNBERG of Upsal. In the library founded in 1628, are more than 40,000 volumes, and 700 MSS., relative to Swiss history, together with part of the *Codex Vaticanus*, on violet-coloured parchment.

Zurich was called by the Romans *Thuricum*, and appears to have existed in the time of CÆSAR called by him *Tigurum*, built on the two banks of the Limmat, where the river Aa immediately issues from the lake. It is, independent of its Roman name, an ancient city, and even now is pointed out the house said to have been occupied by the Emperor CHARLE-

MAGNE ; called *Zum Loch*. RUDOLPH of Hapsburg, in the 13th century, assisted the inhabitants of Zurich to capture or destroy the castles of those feudal lords around, who disquieted them. After enjoying for several centuries the immunities of an imperial city, it was one of the first to join the league of the three foreign Cantons, and subsequently had the privilege of presiding at the diets of the Helvetic confederation. Zurich has the honour of having been the first in Switzerland to embrace the Reformed Religion, commenced by ZUINGLE in 1517, and many Italian families, converts to the Reformation, found an asylum in this, one of its foci.

The people of Zurich are enlightened and intelligent, and literary in their pursuits. It has indeed been called the *Athens* of Switzerland, and we are not inclined to dispute its title. There is at Zurich a public school supported by the Government, for such youths as may not be destined for the church; German, French, Music, Drawing, History, the Elements of Natural Philosophy and of the Mathematics are taught. There is a Philosophical and Agrarian Society in this town, with a Cabinet of Natural History, and it is the natal soil of CONRAD GESNER, MEYER, and other great names. Music seems to be much studied and cultivated, and if we remember right, the late Dr GALL

gave them credit for possessing in an eminent degree the organs of *tune* and *time*. Among their pursuits, they seem passionately attached to flowers; and in this particular it has been said yield the palm alone to Holland, and if we were to form a judgment, from the great profusion every where of *China asters*, in which they seem to vie with each other, we should pronounce it their favourite. Their gardens are fine, and tastefully arranged; no pursuit, certainly, is better calculated to refine the feelings, and correct the taste, than Natural History generally, and particularly botany, including its physiology, and the culture of choice plants and flowers: and we venture to say that the tranquil pleasures which flow from these amusements will find no counterpart in the general recreative pursuits of life.

There is at Zurich a singular though interesting custom, we believe peculiar and exclusive. On the birth of a child, a pretty girl, often the youngest of the family, bearing a large *bouquet* of choice flowers, the fairest of Flora's train, carries the glad tidings to the friends of the family, who generally give presents on the occasion. We were much pleased with Zurich, and its people, and extremely regretted that our limited time did not permit us to pay a visit to M. D'ESCHER DE BERG, at the Chateau de Berg, one

of the most illustrious families of Helvetia, and and from whom we had a very friendly invitation.

We left Zurich on Tuesday, at 5 o'clock A. M. At Brugg, about four miles distant, we halted for a short time. It is a poor wretched and comfortless Catholic town. At the cistern before the fountain, there were a number of floating perforated boxes, containing many fine fish. Farther on to the left we noticed the Castle of Hapsbourg, the cradle of the present Imperial Family of Austria, now supported by the government of Argovie. Here, also, are the baths frequented by the Princes of Germany. At some distance on the right, we passed a convent in the Canton of Argovie, all the forests and lands around belong to this nest of monks; and the peasantry, we were told, superadded their gratuitous services in the culture of the fields. The convent and its dependencies seems from its extent to be almost a town. Two *Louis d'ors* per diem are paid to the government of Argovie as a kind of quit rent for their immense possessions. We passed on the road much that was Catholic, and miserably poor, and encountered troops of pilgrims from France, (occasionally from Rotterdam, a distance of 800 miles) and other parts, on their pilgrimage to "Nôtre-Dame des Ermites," at Einsiedeln in Schwitz. This celebrated wooden "Lady of

the Hermits" is enshrined in a new chapel, constructed of Lucullite or black marble, brought from an adjoining quarry. We stopped for dinner at a poor village on the right bank of the Rhine, when we noticed twenty felons in chains mending the roads, and under a sufficient guard. We crossed the Rhine into the Grand Duchy of Baden, skirted the right bank of this mighty river, and finally entered the protestant Canton of Basle.

We arrived at Basle about 9 o'clock P. M., crossed the river over an uncovered bridge, and took up our abode at an excellent inn, "Les trois Rois," almost overhanging the Rhine. The hotel is thus delightfully situated, and enjoys a beautiful prospect. In our *salle à manger*, in the centre of the table, was a pretty *jet d'eau* in constant play. In Basle all seemed activity and bustle. There are fairs held at regular intervals, and its trade is considerable. There is one silk manufactory, and not fewer than twenty manufactories for ribbands. The Hôtel de Ville was under complete repair, and the renovated decorations had judiciously preserved the original designs. The front is extremely singular, and in the inner court the frescoes on the wall are curious, particularly the figure, holding a letter connected with a memorable event in the history of the city. At a critical juncture in its affairs,

a special messenger was dispatched by the public authorities, and the die depended on his promptitude: he returned within the specific period, having faithfully fulfilled his trust, and, from extreme exhaustion, fell down and expired in the act of delivering his important credentials.

There was formerly a Convent of Dominicans, but the building is now converted into a French church; and on the wall of its cemetery is painted the celebrated Dance of Death *al fresco*, attributed, without reason, to HANS HOLBEIN. It is, however, almost entirely defaced. The Münster or Cathedral is a fine Gothic building, very ancient, constructed by HENRY II. about 1010. Here we were shewn the tomb of the Empress ANNE, the wife of RUDOLPH of Hapsbourg; also the tomb of ERASMUS, a monument of variegated marble. The pulpit was of stone, and the sculpture light and elegant. The roof was covered with various coloured slates, in a diamond form. The organ of the Münster was decorated with paintings by HOLBIEN. The city clock used formerly to be always an hour in advance of the regular time. The University of this city was founded in 1460, and here the celebrated masters ERASMUS, EULER, BERNOULLI, &c. taught—names illustrious to literature and science; and here, too,

figured away that ‘ prince of physicians and of philosophers by fire,” as VAN HELMONT styles him, PARACELSUS, who boasted of the possession of the elixir of life, but he died at the age of forty-nine years, with a bottle of the immortal catholicon in his pocket.

Basle is a lively town, and is abundantly supplied with salmon, and other river fish, from the Rhine. There are numerous collections of engravings, paintings, sculpture, gardens, and museums of natural history. We observed diagonal mirrors attached to the windows in several streets. We visited the Botanic Garden under Professor BURCHARDT, where were some fine plants of the *Mimosa catechu*, and *Stapelia planiflora*, in flower, and unprotected. Altogether the garden is of very limited dimensions. There was a small pond supplied with aquatic plants, and surrounded with rock-work and alpine vegetation. We observed the *Arundo donax* fifteen feet high, and two splendid specimens of the *Cactus heptagonus*, one in flower, and no less than fourteen feet high; they had always been exposed, and stood as sentinels on either hand at the entrance gate. The ‘ Kirchgarten’ at the ‘ Wirtembergerhof,” is a most extensive, curious, and interesting garden, and excited our admiration. There seemed nothing wanting amid the gay creation of horticultural

beauty or decoration—fountains, ponds with gold and silver fish, aviaries, grottos, Chinese bridges, hermitages, and even a sepulchral monument, inscribed “WEISS,” with other accompaniments and appendages. The coffee-rooms seem in Basle to be indifferently attended, and of an inferior description.

Bale, Basle, or Basel, is divided into two unequal parts, by the Rhine flowing through it, called the Great and Little Town, and united by a wooden bridge 600 feet long. The rivulet Birsig, which also flows through part of the town, occasions inequalities in several of the streets. It seems originally to have been a Roman establishment, and now contains about 10,000 inhabitants. There is an agricultural school at Basle, but its resources are very limited. The city embraced the principles of the Reformation in 1529.

We left Basle at 8 o'clock A. M. on Thursday 8th September 1825. It was a day of universal thanksgiving throughout Switzerland for the late plentiful harvest. We took a last look at the land of *HELVETIA*, and often turned in retrospect. Switzerland claimed from us the sigh of gratitude, for we had received much enjoyment and delight in witnessing her sublime and beautiful scenes; and the name will ever

excite powerful associations of no common interest amid the pleasures of memory.

HELVETIA ! " Land of romance !"
 " Forget thee ! never.—Fare-thee-well."

We should consider it a work of supererogation to tell the reader aught of the sequel, our task being done. We pursued our route by Nancy, and after a few days sojourn in Paris, set out on our return to the "land of our fathers." If England cannot boast the same awful features of sublime romance as decorate the snows and glaciers of the lofty Alps, she possesses charms of a holier stamp; and her Hymettus and her Tempe, if they rise to a less elevation, or be vested with less of Nature's glowing foliage, are still clothed with a beauteous robe.—"HAVILAH! where there is gold, and the gold of that land is good." England is the Atlantis of the globe—the emporium of a world's merchandise. Here, too, is the unfettered dominion of mind, in its loveliest, loftiest range. A temporary enjoyment may be possessed in the galaxy of an exotic clime, but the heart will often turn to "home, sweet home!" and this we doubt not will form the minstrelsy of every genuine son of Britain.

We left Boulogne for London with a fair wind, but the storm afterwards became dreadful, and in a few short hours, under many a reef, we

were 'driven into the Downs off Deal. As we passed, we observed with intense interest, happy in our escape, the breakers on the Goodwin sands, where many a gallant ship hath gone down. With us absence only tends to impart a keener relish for the endearments of home, and serves as a foil to set off the sterling worth and lustre of the beautiful "*gem set in the ring of the sea.*"

FINIS.

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